

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE STATE STREET BANK AND TRUST
CO. FIXED INCOME FUNDS INVESTMENT
LITIGATION

MDL No. 1945

PRUDENTIAL RETIREMENT INSURANCE
AND ANNUITY CO.,

Plaintiff,

-against-

07 Civ. 8488 (RJH)

STATE STREET BANK AND TRUST
COMPANY, et al.,

Defendants.

MEMORANDUM OPINION
AND ORDER

Richard J. Holwell, District Judge:

Plaintiff Prudential Retirement Insurance and Annuity Co. (“PRIAC”), brought this action pursuant to sections 409(a) and 502(a)(2) and (3) of the Employee Retirement Income Security Act of 1974 (“ERISA”) against defendant State Street Bank and Trust Company (“State Street”) on October 1, 2007. PRIAC commenced this suit as an ERISA fiduciary on behalf of nearly 200 retirement plans (the “Plans”) that invested, through PRIAC, in two collective bank trusts managed by State Street—the Government Credit Bond Fund (“GCBF”) and the Intermediate Bond Fund (“IBF”) (collectively, the “Bond Funds”). This Memorandum Opinion and Order follows a seven day bench trial on the issue of whether State Street breached its fiduciary duty to the Plans by (1) failing to manage the Bond Funds prudently, (2) failing to

manage the Bond Funds solely in the interest of the Plans, and (3) failing adequately to diversify the Bond Funds' assets.¹ The Memorandum Opinion and Order sets forth the Court's Findings of Fact and Conclusions of Law in accordance with Federal Rule of Civil Procedure 52. For the reasons that follow, the Court finds that (1) State Street breached its duty to manage the Bond Funds prudently, (2) State Street did not breach its duty to manage the Bond Funds solely in the interest of the Plans, (3) State Street breached its duty to diversify the Bond Funds, (4) State Street's breaches caused losses to the Plans, and (5) PRIAC's calculation of damages is appropriate.

FINDINGS OF FACT

I. The Parties

PRIAC is a Connecticut corporation that was established in 2004 when Prudential Financial, Inc. ("Prudential") acquired CIGNA Retirement & Investment Services ("CIGNA") and renamed it PRIAC. (Stipulations of Fact ¶ 1.) PRIAC provides investment options to defined benefit and defined contribution retirement plans; it provides these options to over 7000 organizations and three million participants and beneficiaries.

State Street is a bank organized under Massachusetts law; State Street Global Advisors ("SSgA") is State Street's investment management arm. (Stipulations of Fact ¶ 4.) SSgA provides asset management services to State Street clients.

State Street managed two collective bank trusts that PRIAC made available to its retirement plan clients: the Intermediate Bond Fund ("IBF") and the Government Credit Bond Fund ("GCBF") (collectively, the "Bond Funds"). (Stipulations of Fact ¶ 5.) The Bond Funds were pooled investment vehicles made available to qualified groups of investors. (*Id.* ¶ 7.) State

¹ The remaining claims in this action—State Street's claim for contribution against PRIAC and State Street's defamation claim against PRIAC—are to be tried at a later date.

Street alone held discretion over the management of the Bond Funds' assets. (*Id.* ¶ 5.) PRIAC had no input into State Street's management of the Bond Funds, in State Street's assessment of the risks the Bond Funds incurred, or in State Street's investment decisions for the Bond Funds. (*Id.*)

Nearly 200 of PRIAC's retirement plan clients (the "Plans") invested in the Bond Funds through separate accounts maintained by PRIAC. (*See id.* ¶ 16.) PRIAC's role in this regard was to serve as an intermediary between the Plans and State Street. On August 29, 2007, PRIAC requested that State Street redeem the Plan's investments in the Bond Funds. (*Id.* ¶ 20.) On October 1, 2007, PRIAC commenced this action on behalf of the Plans seeking to recover losses incurred by the Plans as a result of their investment in the Bond Funds.

II. The Bond Funds

A. Benchmarks

Each of the Bond Funds used a Lehman Brothers Index as a benchmark by which the fund's performance could be measured; the GCBF used the Lehman Brothers Government Credit Bond Index, and the IBF used the Lehman Brothers Intermediate Government Credit Bond Index. (*See* Stipulations of Fact ¶ 17.) As stated in the Amended Fund Declarations for each Bond Fund, the investment objective of each Bond Fund "shall be to match or exceed the return of the" applicable benchmark index. (DX 467 (for the GCBF); DX 468 (for the IBF).) The Fund Declarations also provided, "At the time of purchase, all securities purchased by the Fund will be rated at or above investment grade by either Standard & Poor's or Moody's Investor Services." (DX 467; DX 468.)

B. Enhanced Index Funds

A significant amount of the testimony and evidence at trial focused on the meaning of the term “enhanced index fund” and whether State Street presented the Bond Funds to PRIAC as “enhanced index funds.” PRIAC’s position is that it reasonably understood from its communications with State Street that the Bond Funds were “enhanced index funds,” which, in PRIAC’s view, are funds that seek to “modestly outperform the benchmark while taking on minimal additional risk.” (PX 10; *see* Tr. 63:17-21 (Blume testimony).) State Street, on the other hand, contends that it did not present the Bond Funds as “enhanced index funds,” but rather as “active” funds, and that, in any event, the term “enhanced index” has no fixed industry definition, so any attempt to use it to establish the character of the Bond Funds would be inappropriate.

1. Definitions: Excess Return Target (Alpha), Predicted Tracking Error, Information Ratio

The Bond Funds’ risk and return characteristics can be described with reference to two figures: targeted excess return (or alpha target) and predicted tracking error. Both of these figures are measured in “basis points.” Each basis point represents a 0.01% deviation from the benchmark. The basis points for targeted excess returns represent the margin by which the Bond Funds strove to outperform their benchmark; the predicted tracking error measured the anticipated deviation from the benchmark. Predicted tracking error is a way of measuring the risk of a particular portfolio. Predicted tracking error is the variable that an investment manager can control, while targeted excess return (or alpha target) is a goal an investment manager seeks within the targeted tracking error parameters. (*See* Tr. 90:5-7 (testimony of PRIAC’s expert Dr. Marshall Blume (“The item that an investment manager can control is the risk’s characteristics. The alpha or the expected difference between the returns that you obtain and the index are

goals.”)); Tr. 112 (Blume testimony (“I would agree that the alpha is a goal of this fund and the tracking error is the variable that you actually can control.”)).)

A third figure that is relevant to understanding the risk and return characteristics of the Bond Funds is the information ratio. The information ratio is the ratio of a fund’s excess return target to its predicted tracking error. (*See* DX 10, at 2.) A higher information ratio is indicative of a fund that seeks to achieve alpha without a significant amount of risk. (*See* DX 10.) A higher information ratio “can distinguish between the skilled portfolio manager, who achieves outperformance with relatively little risk, from the ‘cowboy’ who achieves outperformance through very high-risk strategies.” (DX 10; Tr. 775:11-14 (Reigel).) An information ratio of 0.5 is reasonable in the investment management industry, (*see* Tr. 817:5-7 (Reigel)); an information ratio of approximately 0.7 is “challenging,” (*see* Tr. 1092); and an information ratio of 1 is “very optimistic” and arguably unrealistic, (Tr. 127:23 (Blume); Tr. 917:24-918:9 (Armstrong)). Each of these figures is relevant in understanding the parties’ dispute about the characterization of the Bond Funds.

2. State Street’s Understanding and Use of the Term “Enhanced”

a. Industry Norms

There is no well-established industry-wide definition of an “enhanced index fund.” (*See* PX 10.) There also are no well-established industry guidelines for the appropriate alpha target and predicted tracking error of an enhanced index fund. Nonetheless, the evidence at trial established some general principles.

An enhanced index fund generally seeks to “modestly outperform the benchmark while taking on minimal additional risk, thus achieving a high information ratio.” (PX 10; *see* Tr. 63:17-21 (Blume).) “The investment management industry generally defines enhanced index

strategies as investment approaches within predetermined risk and return parameters.” (PX 10; *see also* Tr. 1187-88 (testimony of State Street’s expert Dr. Andrew Carron).) Predicted tracking error for enhanced index funds typically ranges between 25 and 75 basis points. (Tr. 67:7-14.) Predicted tracking error for passive funds generally ranges between 5 and 25 basis points, and predicted tracking error for active funds typically is greater than 75 basis points. (*Id.*) Thus, enhanced index strategies are considered to fall somewhere between passive and active strategies. (*See* PX 46.) In addition, a fund whose stated investment objective is to “match or exceed” its benchmark fits “the generally accepted definition of what an enhanced index fund is.” (Tr. 460 (Fischel testimony).)

b. State Street’s Description of an Enhanced Strategy

A State Street document from the mid-1990s reflects the industry norms discussed above. (*See* PX 61.) The document is undated, but footnote references suggest that it was produced around 1996. (*See id.*) The document does not mention either Bond Fund by name nor does it represent a contractual agreement about how the Bond Fund would be managed, but it is relevant in assessing State Street’s understanding of the term “enhanced.”

The document states, “The objective of enhanced management [sic] is to add value over the index while mirroring its risk profile. As a result, our strategy combines the predictable strengths of passive management with the repeatable aspects of active management.” (*Id.*; *see also* Tr. 226 (Hatfield testimony) (stating that “enhanced index” was a term State Street used to describe its products).) The document also states that enhanced index strategies usually seek an excess return of 20 to 30 basis points over their benchmark index. In addition, according to the document, “the annual guideline for maximum total tracking error is 75 basis points” for enhanced index strategies. (PX 61.) The document describes tracking error as an “ex-ante

number based upon a variance/co-variance matrix developed at Lehman Brothers.” (*Id.*) This notion of predicted tracking error as the variable that the investment manager can control is consistent with the testimony of PRIAC’s expert, Dr. Marshall Blume, who opined, “The item that an investment manager can control is the risk’s characteristics. The alpha or the expected difference between the returns that you obtain and the index are goals.” (Tr. 90:5-7; *see also* Tr. 112 (“I would agree that the alpha is a goal of this fund and the tracking error is the variable that you actually can control”).)

State Street understood the term “enhanced” to refer to a type of strategy that fell somewhere between purely passive and fully active. State Street’s 2004 Fixed Income Procedure Guide stated: “At SSgA, we view the active risk-return spectrum as continuous and we have strategies with varying degrees of risk that span from passive, to enhanced to fully active strategies.” (DX 571; *see also* PX 461 (graph showing “Risk (Tracking Error)” on the x-axis, “Value added (Excess return)” on the y-axis, and “Enhanced Indexing Strategies” falling between “Passive Management” and “Active Management”).)

In an October 2006 presentation to business students at the Kenan-Flagler Business School, State Street described its “goal” for its “Global Fixed Income” division. The goal was “[t]o provide benchmark oriented, highly risk-controlled investment strategies at very low cost.” (PX 498.) State Street’s presentation also referred to each Bond Fund and its “Enhanced Index Benchmark.” (*Id.*)

C. State Street’s Description of the Bond Funds

1. State Street’s Descriptions of the Bond Funds to PRIAC

In 1996, prior to the Plans’ investment in the Bond Funds, State Street faxed a letter to Amy Hatfield of PRIAC that used the term “Enhanced” in the name of each Bond Fund. (*See* PX

82.) The investment management agreement that the parties later signed, however, did not use the term “Enhanced” in the name of either Bond Fund. (Tr. 238-39 (Hatfield); DX 470.)

In a 2002 email to Robert Frasca of PRIAC,² a State Street employee informed PRIAC that “SSgA is willing to offer a lower fee schedule for the enhanced bond funds within the Cigna [PRIAC’s predecessor] Program. We believe that the schedule below is an accurate fee that recognizes the role of enhanced funds between active and passive strategies.” (PX 46.)³ The fee schedule provided that State Street would charge a fee of 10 basis points for the first \$50 million of assets in the fund, a fee of 8 basis points on the next \$50 million, and a fee of 6 basis points on any amount thereafter. (*Id.*; Stipulations of Fact ¶ 8.) By contrast, the average fee for a State Street active fund in 2007 was 52 basis points. (*See* PX 625.)

In an October 2002 presentation to CIGNA, State Street presented its fixed income funds as falling into three categories: “Active,” “Enhanced,” or “Passive.” (PX 406.) The GCBF was listed in the “Enhanced” category. (*See id.*)

In 2003, PRIAC employees conducted a site-visit at the State Street offices. At a presentation during the visit, State Street categorized the Bond Funds as part of an “Active Core Bond Strategy.” (PX 63.) State Street indicated that both Bond Funds had an excess return target of 30-40 basis points and a predicted tracking error of 40-50 basis points. (*Id.*) State Street’s presentation also described the Bond Funds as employing a “risk-controlled process [that] ensures consistent, steady performance.” (*Id.*)

Following the visit, Robert Frasca, a PRIAC employee, wrote a summary of the visit, which stated, “Although SSgA characterizes the [Bond Funds’] strategies as actively managed, they truly fall between passive management, where TE is expected to be 0-10 bps and active

² Frasca was the mandate team leader for the Bond Funds and as such was responsible for monitoring the Bond Funds for PRIAC. (Tr. 251:16-24 (Frasca testimony).)

³ Frasca testified that he understood this email to refer to the Bond Funds. (Tr. 264:12-265:3.)

management, where TE is expected to be in excess of 70 bps.” (PX 48.) A State Street employee similarly noted in a written summary of the visit that both Bond Funds “reside on Cigna’s platform of products in an enhanced bond category. They are available for selection if plan sponsors choose the particular style offered by the strategies—low tracking error fixed income.” (PX 635.) State Street’s summary indicates that it understood the Bond Funds to employ a “low tracking error” strategy, which is consistent with the 1996 description of an enhanced strategy as one that seeks to “add value over the index while mirroring its risk profile,” and with the 2003 description of the Bond Funds’ “risk-controlled process.” (PX 61; PX 63.)

Through the middle of 2005, PRIAC created quarterly Fact Sheets about each of the Bond Funds to send to the Plans. Before sending the Fact Sheets to the Plans, PRIAC sent them to State Street for State Street’s review and approval. The Fact Sheets used language substantially similar to the language used in State Street’s 1996 description of its enhanced index strategies (PX 61). For example, the Fact Sheet for the IBF from the fourth quarter of 2004 describes the Fund as “employ[ing] an enhanced bond indexing strategy which seeks to add consistent value over the benchmark through a disciplined, risk-controlled investment process that combines qualitative and quantitative portfolio management techniques.” (PX 77.) State Street approved these Fact Sheets without commenting on the use of the term “enhanced bond indexing strategy” or on the description of that strategy; it did, however, provide comments unrelated to those issues. (*See* Flinn Dep. 48-49, 54-57; DX 94; PX 411; PX 549; PX 557.) PRIAC sent materially identical Fact Sheets to State Street again in mid-2007, and State Street again approved the Fact Sheets without commenting on the language describing the Funds’ strategy as “enhanced,” although there is no indication that PRIAC specifically asked State Street to do so. (*See* DX 42; DX 49.)

In some later communications with PRIAC, State Street referred to the Bond Funds as “active.” Commentaries and characteristics reports sent to PRIAC in January and June 2007 referred to the “Active Core U.S. Government/Credit Fund” and the “Active Intermediate Bond Fund.” (DX 215 (January 2007); DX 170 (June 2007).) At the same time, State Street sent other communications to PRIAC that continued to describe the Bond Funds as enhanced. (*See* PX 456 (January 2007 communication referring to the “Govt/Credit Enhanced Bond”); PX 555 (same in July 2007).)

The references to “active,” however, do not alter State Street’s prior and more specific descriptions of the Bond Funds as having “low tracking error,” (PX 63), and using “a risk-controlled” strategy, (PX 498). Nor would the references to “active” necessarily have put PRIAC on notice that the Bond Funds had undergone any material change in strategy because PRIAC always understood that there was an “active element” to the Bond Funds, in the sense that the Bond Funds sought excess returns by taking positions that did not simply mirror the Funds’ benchmark indices. (*See* PX 280.) Thus, PRIAC reasonably understood that State Street was offering the Bond Funds as investments that employed a “low tracking error,” “risk-controlled” approach that sought to “modestly outperform the benchmark while taking on minimal additional risk.” (PX 63; PX 10.)

2. State Street’s Description of the Bond Funds that Did Not Directly Reach PRIAC

In a March 2004 internal presentation, State Street described CIGNA as a client who used State Street’s “Enhanced Fixed” strategies. (*See* PX 644.) Gregory Mulready, a State Street client services representative, testified that he understood this presentation to indicate that CIGNA offered State Street’s enhanced index funds—including the Bond Funds—to its clients. (*See* Mulready Dep. 51.)

Similarly, during the 2006 presentation to business school students described above, State Street made reference to each Bond Fund and its “Enhanced Index Benchmark.” (*See* PX 498.)

D. The Bond Funds’ Alpha Targets and Targeted Predicted Tracking Error over Time

When the Plans first invested in the Bond Funds in the mid-1990s, the Bond Funds sought excess returns of 20-30 basis points over their benchmark indices. (*See* PX 61, Tr. 302-03 (Frascona testimony).)

When PRIAC conducted its 2003 site-visit at the State Street offices, State Street informed PRIAC that both Bond Funds had an excess return target of 30-40 basis points and a predicted tracking error of 40-50 basis points. (*See* PX 63.)

In February 2005, Robert Frascona of PRIAC sent an email to Kallie Hapgood of State Street inquiring about the performance of the Bond Funds. (*See* DX 147.) Frascona indicated that from 2002 to 2004 the Bond Funds intentionally had tracked their benchmark indices so that, net of fees, the Bond Funds actually underperformed their benchmarks. (*See id.*) Frascona suggested that three years was a long time for an “ENHANCED INDEX FUND” simply to replicate the performance of its benchmark. (*Id.* (capitalization in original).) Frascona’s email suggests that PRIAC expected the Bond Funds to generate at least some excess returns over their benchmarks.

Hapgood responded to Frascona’s email with updated alpha target, predicted tracking error, and information ratio figures. Hapgood’s response indicates that the Bond Funds’ alpha target currently was 40-60 basis points, that their predicted tracking error was 50-75 basis points, and that their targeted information ratio was greater than 0.5. (*See id.*) These figures are consistent with State Street’s description of the Bond Funds as “enhanced” index funds that

utilized a “low tracking error,” “risk-controlled” approach that PRIAC understood sought to “modestly outperform the benchmark while taking on minimal additional risk.” (PX 63; PX 10.)

Hapgood’s figures for the Bond Funds’ alpha target (40-60 basis points) and predicted tracking error (50-75 basis points) yield an ex-ante information ratio of 0.8. This is a challenging information ratio, but it is consistent with an enhanced index fund’s general goal of “achieving a high information ratio.” (PX 10.) In any event, since the predicted tracking error of a fund is the variable the investment manager can control, (Tr. 112 (Blume)), Hapgood’s figures are more indicative of an overly optimistic alpha target than they are of an understated predicted tracking error. Accordingly, Hapgood’s figures would not have given PRIAC reason to believe that the Bond Funds’ risk targets exceeded the 50-75 basis points stated in the email.⁴

Hapgood’s email was the last time that State Street reported predicted tracking error figures to PRIAC. (*See* Tr. 1198:5-11 (Carron testimony).)

By May 2006, State Street had increased the Bond Funds’ alpha target to 70-80 basis points. (*See* PX 142; Tr. 813 (Reigel testimony).)⁵

State Street offered its clients, including PRIAC, access to certain account information through State Street’s Client’s Corner website. State Street made PRIAC aware of the existence of the website through emails. Every month, State Street emailed Robert Frascina of PRIAC a copy of monthly performance reports for the Bond Funds, and in the same email, State Street wrote,

⁴ State Street’s disclosure of a predicted tracking error range does not suggest that State Street was agreeing that the Bond Funds’ tracking error *always* would remain within the stated range. Indeed, predicted tracking error is based on a set of assumptions about how the market will perform, so it is a figure that itself changes based on changes in the market. (Tr. 915-16 (Armstrong testimony).) Nonetheless, State Street’s disclosure does suggest that it was agreeing to make investment decisions in the Bond Funds that, based on available risk metrics, reasonably could be expected to keep the Bond Funds within their stated predicted tracking error range.

⁵ It bears noting that in January and October 2006, State Street made presentations to one of its other clients, Unisys, in which it indicated that the IBF had an alpha target of 20-40 basis points. (*See* PX 829, at 27; PX 834, at 28.)

You can access your reports on SSgA's Client's Corner, our password protected website. Client's Corner provides secure access to your organization's investments with SSgA, including: Performance Information and Quarterly Investment Commentary; Appraisals and Trade Summaries of commingled funds; SSgA Research and Commentary; Direct link to your SSgA Client Service Team to submit questions and requests.

(DX 392.) In 2007, the Client's Corner website for PRIAC listed the Bond Funds as "active" and indicated they each had an alpha target of 50-75 basis points. The website did not indicate a predicted tracking error for the Bond Funds.

In 2007, only two individuals from PRIAC accessed the website. Michelle Cappalla, a back office employee, accessed the website in March, and Matthew Dingee, a PRIAC analyst and a direct report to Robert Frasca, accessed the website in August and September. (*See* DX 89; DX 830.)

State Street's Head of Risk Management, Patrick Armstrong, testified that in 2007 the Bond Funds were managed according to an ex ante information of 0.5, and that, in his opinion, an information ratio greater than 0.5 was "overly ambitious, overly heroic, because I don't see it empirically."⁶ (Tr. 916:19-21, 917:24-918:9.) An information ratio of 0.5, along with an alpha target of 50-75 basis points, means that the Bond Funds in 2007 were being managed to accept a predicted tracking error of 100-150 basis points. (Tr. 916:22-917:3 (Armstrong testimony).) This figure is double the predicted tracking error range disclosed to PRIAC in 2005 and is materially greater than the previously disclosed range. Nonetheless, State Street never disclosed the figure to PRIAC. Although State Street did post the Bond Funds' alpha targets on a rarely-used web portal, that disclosure was insufficient to notify PRIAC of the change in risk target that occurred between 2005 and 2007. To conclude from the Client's Corner website that the Bond

⁶ There is little evidence to suggest that Armstrong's view that an information ratio greater than 0.5 is unrealistic was shared by PRIAC or by the investment industry generally. PRIAC's expert Dr. Blume called an information ratio of one "very optimistic." (Tr. 127:23.)

Funds had increased their predicted tracking error to 100-150 basis points, PRIAC would be required to assume that the information ratio of 0.8 implicit in Hapgood's 2005 email was unrealistic *and* that the website's alpha target reflected State Street's willingness to accept a predicted risk-range that was double what it previously had disclosed to PRIAC. Based on the evidence, that is not an assumption that PRIAC reasonably should have made. At most, the Client's Corner website could have put PRIAC on alert that the Bond Funds had increased their predicted tracking error range to approximately 62-93 basis points, which is the predicted tracking error gleaned from the 50-75 basis point alpha target and the 0.8 information ratio implicit in Hapgood's email. In either event, the use of the rarely-viewed Client's Corner website was not an adequate way of making PRIAC aware of the significant increase in predicted tracking error.

State Street's failure to adequately disclose the increase in predicted tracking error of the Bond Funds to 100-150 points is significant because the evidence shows that PRIAC relied on the predicted tracking error figures in monitoring the Bond Funds. Following PRIAC's 2003 site visit at State Street, Robert Frascogna of PRIAC made the following comment in his written "Site Visit Debrief,"

Comments made during the meeting implied that SSgA is continuing to develop and test various strategies. This gave us the sense of a learn while doing. Given the risk constraints (TE band) we did not sense that the portfolio's [sic] are at risk, but as with all managers, SSgA's approach is continually evolving.

(PX 48.) This comment suggests that PRIAC was aware that State Street might increase the risk in the Bond Funds' portfolios by some amount, but more importantly, it suggests that PRIAC relied on the Bond Funds' stated predicted tracking error range in assessing the continued viability of the Bond Funds as investments on its enhanced index platform.

Based on the foregoing, PRIAC was justified in understanding that the Bond Funds were “enhanced index funds” that employed a “low tracking error,” “risk-controlled” strategy that sought modest returns over their benchmarks without taking on significant additional risk. With respect to risk metrics, PRIAC was justified in understanding that the Bond Funds would be managed to accept a predicted tracking error range of roughly 50-75 basis points.

E. The Portfolio Managers’ and the Fixed Income Executives’ Understanding of the Bond Funds

The portfolio managers and the fixed income executives at State Street (most of whom did not interact with clients with any regularity) testified that they would not have described the Bond Funds’ strategy as “enhanced,” and were unaware that others within State Street had presented the Bond Funds to PRIAC as such. (*See* Tr. 810-12 (Reigel testimony); Pickett Dep. 824-26 (portfolio manager for the IBF agreeing that both Bond Funds employed predicted tracking errors and alpha targets that were higher than those of an enhanced index fund, and that he would not describe the Bond Funds as enhanced index funds); Wands Dep. 104-05 (State Street’s Head of North American Fixed Income noting that the “enhanced” description “would have been inconsistent, in 2007, with what the portfolio group thought of as their products”).)

F. The Context of the Increase in Alpha Target and Predicted Tracking Error

In 2006, State Street adopted a business strategy to “leverage fixed income,” (PX 139), and one of its goals was to “Establish SSgA as a Global Leader in Active Fixed Income.” (PX 184; *see* Tr. 816 (Reigel testimony).) In August of that year, Paul Greff, State Street’s Head of Global Fixed Income, prepared an outline of bullet points that he would later use in a video presentation made available to State Street employees addressing State Street’s strategy of gaining recognition as an active fixed income manager. Under the heading “How will we do

it?”, Greff indicates that State Street should “[t]ake more active risk,” and “[g]enerate higher returns for clients in existing products.” (PX 141.)

Susan Reigel, the portfolio manager for the GCBF (and the back-up portfolio manager for the IBF), testified that State Street’s business strategy had no impact on her management of the Bond Funds. (Tr. 807-08.) Sean Flannery, the former Chief Investment Officer of SSgA, also testified that the “leverage fixed income” initiative had no impact on the Bond Funds. (Tr. 594:17-596:6.) However, Reigel also testified that in 2006 Michael O’Hara, State Street’s Head of Active Global Fixed Income, told her that the alpha targets of the Bond Funds should be increased from 50 basis points to 70-80 basis points. (*Id.* at 816.) O’Hara was one of the senior State Street managers that orchestrated State Street’s initiative to gain recognition as a manager of active fixed income. (*See* PX 141.) This is the only direct evidence that PRIAC has presented of a connection between the “leverage fixed income” initiative and the decision to increase the alpha targets for the Bond Funds. But it sheds little light on the rationale behind the decision. A direction from O’Hara to increase the alpha target of the Bond Funds is insufficient to establish that the decision was the result of State Street’s business objectives.

G. The Bond Funds’ Alpha-Seeking Investments

The Bond Funds sought to achieve their excess return targets by investing in off-index securities. The Bond Funds’ off-index investments were comprised largely of an investment in another State Street fund called the Limited Duration Bond Fund (“LDBF”), and in derivative securities backed by subprime-based assets.

1. The Limited Duration Bond Fund

The LDBF was created to provide a source of “portable alpha” for other State Street fixed income funds. (*See* PX 176.) As of June 30, 2007, over 85% of the \$1.3 billion invested in the LDBF was invested by other State Street funds. (*See* PX 640.)

The LDBF did not perform well compared to its peer funds. Its five-year annualized returns through March 2007 put it in the bottom sixth percentile of 128 peer funds. (Tr. 850-51.) While the LDBF did generate positive returns, the returns were only slightly above the London Interbank Offered Rate (LIBOR), the “risk-free interest rate” that was the LDBF’s benchmark. (Tr. 1210-11 (Carron); PX 487.)

The LDBF sought to achieve excess returns by investing in increasing amounts of home-equity Asset Backed Securities (“ABS”), otherwise known as subprime securities.⁷ By January 2007, approximately 93% of the LDBF’s notional holdings (\$2.035 billion out of \$2.190 billion) were invested in various forms of subprime securities. (*See* PX 601, at SSE000000816 (Excel Spreadsheet, tab labeled “jan07,” table labeled “Sector Distribution (Assets)”)).

State Street limited the amount of money any one State Street fund could invest in the LDBF. Before 2006, that limit was 20% of the market value of the fund that chose to invest in the LDBF. (*See* PX 436.) The limit later was increased to 25%. (*See* Tr. 854:5-9 (Reigel).) The limit was calculated by looking both at the fund’s direct investments in the LDBF and also at the fund’s exposure to the LDBF obtained by investing in other State Street funds that themselves invested in the LDBF. (Tr. 854:13-22 (Reigel).) In other words, State Street employed “a look-through analysis” in calculating the 25% limit. (*Id.*) The Bond Funds, however, also could invest

⁷ The category “Asset Backed Securities,” or “ABS,” includes securities that are backed by various forms of assets, such as mortgages, automobile loans, credit card receivables, or student loans. (*See* Tr. 68:17-19.) Home equity (or subprime) ABS refer to securities backed by subprime mortgages. Subprime mortgages are mortgages given to individuals with poor credit histories, for example, mortgages to individuals with histories of not servicing their debt or to individuals with incomes lower than the income of a prime borrower. (Tr. 69:16-21 (Blume testimony).)

directly in the same securities as the LDBF without contributing to the 25% limit, and the Bond Funds did so. (*Compare* PX 824 (showing the IBF's total exposure to subprime ABS, including the exposure obtained through LDBF), *with* PX 825 (showing the IBF's exposure to subprime excluding the exposure obtained through LDBF).)

The Bond Funds invested a substantial portion of their assets in the LDBF. As of June 29, 2007, the IBF had invested 23.45% of its assets (based on market value) in the LDBF. (Tr. 855.) At the time, the market value of the IBF's assets was \$1.279 billion. Similarly, the GCBF, as of June 29, 2007, had exposure to the LDBF equal to 22.74% of the GCBF's net asset value. (DX 351, Ex. 4.)

The Bond Funds' notional exposure to the LDBF was much greater than 25% of the market value of its assets. As of June 29, 2007, the IBF's notional exposure to the LDBF totaled \$1.5 billion, or approximately 117% of the total market value of the IBF. (*See* Tr. 856 (Reigel).) Virtually all of this exposure was to securities backed by subprime mortgages. (*Compare* PX 824, *with* PX 825.)

2. Derivative Securities

The Bond Funds also sought to achieve excess-returns by investing in derivative securities. State Street defined derivative securities as "securities that derived their value from another or other securities." (PX 284.)

The Bond Funds took substantial positions in two derivative instruments that derived their value from the performance of underlying home-equity ABS (or subprime securities): (1) Total Return Swaps ("TRS") on the Lehman Brothers Floating-Rate Asset Backed Securities Home Equity AAA and AA indices, and (2) the ABX Index.⁸

⁸ The Bond Funds obtained exposure to these instruments both through the LDBF and by holding them directly.

a. Total Return Swaps

The TRS on the Lehman Brothers Floating-Rate Asset Backed Securities Home Equity AAA and AA indices worked as follows. State Street and a counterparty (as relevant here, usually a subsidiary of Lehman Brothers (*see* Tr. 80)) would agree on a “notional” amount for the swap, for example, \$1 million. The counterparty then would agree to pay State Street the return on the relevant Lehman Brothers Index over a specified period of time based on the notional amount. State Street, in turn, agreed to pay the counterparty some established interest rate, usually an amount above LIBOR, likewise based on the notional amount of the swap. Thus, if the Lehman Brothers Index generated a higher return than the rate State Street agreed to pay the counterparty, State Street would make money. By contrast, if the Lehman Brothers Index underperformed the counterparty’s rate, State Street would lose money. (*See* Tr. 77-78 (Blume testimony).) The TRS allowed State Street to gain exposure to the underlying indices while putting little or no cash up front. (*Id.*)

The TRS were not standardized financial instruments and were traded over-the-counter in a thin market. (Kinney Dep. 7/7/2009 at 173.) The underlying assets in the Lehman Brothers indices were priced only weekly, which suggests that the market for the underlying assets was not strong and that the underlying assets were rather illiquid. (Tr. 78-79 (Blume).) In addition, since Lehman Brothers was the only counterparty from whom State Street could receive a bid or cancel the swap, (Kinney Dep. 7/7/2009 at 173-74), the swaps themselves were not very liquid. (Tr. 78:11-13 (Blume testimony).) State Street’s head trader Andrew Tenczar, however, testified that he consistently monitored the liquidity of the TRS by conversing with dealers and other market participants about prices and spreads, and that he never had difficulty with liquidity until July and August of 2007. (Tenczar Dep. 51, 59, 149.)

The Lehman Brothers indices on which the TRS were based were created in May 2005, with data backfilled to 2005. (Tr. 78-79 (Blume).) The limited history of performance data meant that attempts to model the risk characteristics of the TRS through different market cycles would likely prove unreliable. (*Id.*) Indeed, in July 2007, one State Street employee remarked to another, “Well the problem is you and I both know that there is no history, no experience upon which to draw here. You can’t watch this through other cycles, because the product did not exist.” (Kelly Dep. 82-83.) This statement reflects the concept of “model risk” which occurs “when a model is calibrated incorrectly relative to the environment it is trying to capture.” (Tr. 1011:23-25 (Armstrong testimony).) Model risk increases the risk of large losses relative to a fund’s benchmark. (*See* Tr. 90-91 (Blume testimony).)

In late August 2007, in preparation for a presentation to State Street’s board of directors, State Street employees prepared a list of talking points about SSgA’s investment strategies. (*See* PX 585.) One of the bullet points in that document states, “How does SSgA identify the risks associated with new and relatively untested instruments?” (*Id.*) Under a sub-bullet point entitled “To manage,” the author indicates that SSgA employs the concept of “naïve allocation (cap allocation to manageable size – from perspective of notional at risk).” (*Id.*)

Despite the stated approach to managing the risks of untested instruments, each Bond Fund held, by the end of March 2007, over \$1 billion in notional exposure to the AAA and AA TRS. (*See* Pickett Dep. 8/12/2009 at 1019:15-19; PX 319.) One billion dollars in notional exposure to an untested instrument (when the net asset value of the entire fund is less than \$1.3 billion) is inconsistent with State Street’s stated methodology of “cap[ping] allocation to manageable size – from perspective of notional at risk.” (PX 585.)

In addition, the AAA and AA ratings in the names of the TRS do not refer to the credit quality of the swap, but to the credit quality of the assets underlying the indices. (Tr. 79-80 (Blume).) A subprime security with a AAA rating is intended by the rating agency to reflect the same level of credit risk as a AAA rating on a corporate bond. (Tr. 668 (Flannery testimony).) As early as September of 2006, however, State Street considered any subprime security rated below AAA to be the equivalent of a “distressed” security. (*See* Tenczar Dep. 146-48 (State Street’s head trader describes an email exchange with Michael Wands, State Street’s Head of North American Fixed Income).)

b. The ABX Index

The ABX Index actually was a series of six subindices, each of which was offered in four vintages, two in 2006 and two in 2007. The subindices ranged in credit quality from AAA to BBB-. The value of each subindex was determined with reference to a basket of twenty other derivatives known as credit default swaps. The credit default swaps, in turn, derived their value from the value of an underlying individual home equity Asset Backed Security. (*See* Tr. 81.) The ratings of the subindices were derived from the ratings of the underlying individual home equity Asset Backed Securities. (Statchel Dep. 127-28.)

There were two ways in which an investor could participate in a particular ABX Index. One way was to “buy protection;” the other was to “sell protection.” (Tr. 81:23-24.) The buyer of protection would be required to pay the seller of protection a certain periodic premium (based on the notional value of the trade), but also would be entitled to receive a specified payment (also based on the notional value of the trade) from the counterparty if certain events negatively affected the value of the underlying reference assets. The seller of protection would be entitled to receive the buyer’s periodic premium payments, but also would be obligated to pay the buyer

if the same certain events negatively affected the value of the underlying reference assets. (*See* Tr. 81.)

State Street sold protection in the 2006-2 vintage of the ABX BBB Index, and also in the ABX AA Index. (*See* Tr. 81-82; PX 318; PX 319.) Thus, State Street was “long” the ABX Index, in the sense that it would profit if the Index performed well. (Tr. 82:14.)

Similar to the TRS on the Lehman Brothers indices, the ABX Index lacked historical data on which to model its risk characteristics. State Street originally modeled the risk of the instrument using the underlying individual home equity ABS as a “proxy.” (Pham Dep. 57-58.) By February 2007, however, State Street realized that this approach understated the instrument’s risk. At that time, Patrick Armstrong, State Street’s Head of Risk Management, wrote,

The problem with the modelling [sic] of the ABX BBB trade was that given the short history of the synthetic, we did proxy its behaviour [sic] to the attendant cash instrument in order to obtain a robust time series. However, what has become apparent is that the synthetic is trading with much more volatility than the cash instrument.

(PX 282.)

H. The Bond Funds’ Exposure to Subprime in 2007

The Bond Funds’ exposure to home-equity ABS (or subprime securities) derived primarily from the Funds’ investments in the LDBF, from their investments in the TRS on the Lehman Brothers home-equity ABS indices, from their investments in the ABX Index, and from their additional direct purchases of ABS cash bonds.

As an initial matter, the Court finds that the evidence did not establish that subprime investments in general, or any of the specific subprime instruments discussed above, were per se inappropriate for the Bond Funds to hold. Indeed, PRIAC’s expert Dr. Blume admitted that he was not offering an opinion to that effect. (Tr. 148.) Accordingly, the level of exposure and

concentration in that sector—rather than the mere fact of it—will be particularly relevant in determining prudence.

In March 2007, the IBF had notional exposure to subprime securities totaling nearly \$1.4 billion dollars. (*See* PX 319.)⁹ Of that amount, approximately \$1 billion was attributable to the IBF's exposure to subprime TRS; approximately \$29 million was attributable to the ABX trade, \$26 million of which was attributable to the BBB ABX trade;¹⁰ the remaining \$296 million in exposure was attributable to cash bonds backed by subprime instruments. (*See id.*) At the time, the total notional value of the entire IBF was \$1.719 billion. (*Id.*) Thus, the IBF's notional exposure to subprime accounted for nearly 81% of its total notional exposure as of March 30, 2007.

At the end of June 2007, the IBF had increased its total notional exposure to subprime to nearly \$1.8 billion. (*See* PX 318.) Of that amount, approximately \$1.2 billion was attributable to the IBF's exposure to subprime TRS; approximately \$110 million was attributable to the ABX trade, \$45 million of which was attributable to the BBB ABX trade; the remaining \$460 million in exposure was attributable to cash bonds backed by subprime instruments. (*See id.*) Thus, between March and June 2007, the IBF increased its exposure to the ABX Index by nearly 280%. At the end of June, the IBF's notional exposure to subprime securities totaled 45% of the total notional value of the entire fund. (*See id.*)¹¹

⁹ PX 319 displays a chart detailing the total ABS holdings of the IBF as of March 30, 2007. The chart indicates total notional holdings in ABS of \$1,408,731,148.00, of which \$11,507,018.00 (or approximately 1%) is attributable to categories of ABS other than home-equity/subprime. The figures include the exposure to subprime securities that the IBF incurred through its investment in the LBDF.

¹⁰ The chart indicates that \$26 million in exposure is from the "BAA" ABX position. The chart, however, uses Moody's ratings system, and a Baa rating from Moody's is the equivalent of a BBB rating from Standard & Poor's.

¹¹ The GCBF's concentration in subprime securities is discussed in the following section on leverage.

I. Leverage

In response to an inquiry from a client regarding State Street's use of derivatives and leverage in its portfolios, State Street wrote, "We define leverage as those portfolios whose market value exposure exceeds its net asset value." (PX 284, at SS003015105 (April 2007).) In the same document, State Street agreed that a portfolio employed leverage by "holding a notional amount of assets greater than the NAV of the portfolio." (*Id.* at SS003015106.) State Street further explained,

To the extent that derivatives are used as a means of generating unfunded market exposure and the unencumbered cash is invested in sectors or securities other than cash-like instruments or vehicles, we would consider that leverage. For example, the use of total return swaps to generate market exposure and the investment of that freed-up cash into a short term cash fund would not be considered leverage in our opinion. However, to invest that cash into the market segment that is represented by that total return swap would be considered leverage in our opinion.

(*Id.*)

State Street employed leverage of this variety in the Bond Funds. In March 2006, gross leverage for each Bond Fund totaled 1.27 to 1. In November 2006, gross leverage for the IBF increased to 2.82, and gross leverage for the GCBF increased to 2.98. In May 2007, gross leverage for the IBF increased to 3.55, and gross leverage for the GCBF increased to 4.29. By the end of July 2007, gross leverage for the IBF increased to 4.56, and gross leverage for the GCBF increased to 6.1. (*See* PX 214.)

These gross leverage figures include trades of high notional value that State Street attempted to use as hedges against some of its subprime investments, and as such, the gross leverage figures somewhat overstate the extent to which "leverage"—as that term is used to describe an investment manager's decision to amplify his or her portfolio's exposure to a particular sector or asset class—actually was employed. For example, while the increase in

leverage in the middle of 2007 was “mainly due to increased use of HE [home-equity] TRS,” it also was due to “high notional Eurodollar and Libor basis swaps.” (PX 214.)

State Street employed these “high notional” trades in an attempt to hedge the Bond Funds’ exposure to subprime assets. The idea behind the hedging trades was that, as volatility in the bond market increased, investors would make a “flight to quality,” which would raise the price and lower the interest rates on “quality” investments like government instruments, which would, in turn, increase the value of State Street’s position in the Eurodollar or Libor basis swaps. (*See* Tr. at 912:20-913:14 (Armstrong testimony).) These trades largely were a hedge against interest rate risk. (Tr. 832:23-25 (Reigel testimony).)

The subprime securities in the Bond Funds, however, were subject to no appreciable interest rate risk because the ABS on which they were based were floating-rate instruments. (Tr. 832 (Reigel testimony).) Instead, the securities were subject largely to credit risk. (*Id.*) As such, State Street’s high notional Eurodollar and Libor basis swap trades were not a meaningful hedge against State Street’s subprime exposure. (*See* Tr. 835 (noting that one State Street portfolio manager believed that the notion of using “Interest Rate Strategies” as a hedge against subprime was “too narrow a view”); *see also* Tr. 188:24-189:3 (Blume testimony).) The trades were sufficiently immaterial that State Street omitted them from internal summaries of the LDBF’s holdings. (PX 612; Tr. 829 (Reigel testimony).)

In addition, the “hedges” were ineffective. For July 2007, all of the purported hedge trades in the GCBF accounted for 9 basis points of gain, while subprime exposure accounted for 470 basis points of losses. (*See* DX 846; Tr. 840 (Reigel testimony).) In the IBF, the hedge trades accounted for 7 basis points of gain, while subprime exposure accounted for 467 basis points of losses. (DX 846.) Thus, while the gross leverage figures may somewhat overstate the

risk of the portfolio, the ineffectiveness of the purported hedging trades makes any overstatement relatively minor.

Even absent the hedge trades, the amount of leverage attributable to the Bond Funds' subprime exposure was substantial. As of May 31, 2007, the IBF had exposure (including notional and market value exposure) to subprime assets totaling 143% of the net asset value of the entire fund.¹² Of that amount, the IBF's exposure to subprime TRS totaled 103.3% of the net asset value of the fund; its exposure to the ABX Index totaled 6.2% of the net asset value of the fund; and its exposure to other ABS, which primarily included cash bonds, totaled 33.6% of the net asset value of the Fund. (*See* PX 18, Ex. 13A.)

The leverage in the GCBF is similar. As of May 31, 2007, the GCBF had exposure to subprime securities that totaled 151% of the net asset value of the entire fund. Of that amount, the GCBF's exposure to subprime TRS totaled 99% of the net asset value of the entire fund; its exposure to the ABX index totaled 7.4% of the net asset value of the entire fund; and its exposure to other ABS, which, like in the IBF, primarily included cash bonds, totaled 44.7% of the net asset value of the fund. (*See* PX 18, Ex. 14A.)

J. Diversification

As suggested by the discussion above, nearly all of the Bond Funds' off-index investments were concentrated in home-equity (or subprime) ABS. By the end of May 2007, 96% of the GCBF's ABS exposure and 99% of the IBF's ABS exposure were to subprime home-equity ABS. (Tr. 96:20-23 (Blume testimony).) By comparison, subprime ABS constituted only 39% of the Lehman Brothers Floating Rate ABS Index. (Tr. 96:24-97:3.) The remainder of the Lehman Brothers Floating Rate ABS Index was composed of Credit Card ABS (39%), Auto Loan ABS (7%), and "Other" ABS (15%). (PX 18, Ex. 15.) In addition, based on comparative

¹² This amount includes the exposure obtained through the LDBF.

yield levels, home-equity ABS were riskier than those other types of ABS. (Tr. 71:17-25 (Blume testimony).)

The Bond Funds' diversification can be analyzed both in terms of diversification external to its subprime exposure and diversification internal to its subprime exposure. External diversification refers to the Bond Funds' exposures to different sectors of the fixed income market apart from their exposure to subprime ABS. (Tr. 1124 (Carron testimony).) Internal diversification refers to the level of diversification inherent in the ABS themselves. (Tr. 1124-25 (Carron testimony).)

With respect to external diversification, as of the second quarter of 2007, ABS constituted approximately 40% of the exposure by market value in the GCBF and about 35% of the exposure by market value in the IBF. (*See* DX 351, Ex. 9; Tr. 1126 (Carron testimony).) The remaining market value exposure was divided between Treasury securities, Agency securities, Corporate securities, and a small percentage of Mortgage Backed Securities (or "MBS")¹³. (*See* DX 351, Ex. 9.)

These figures understate the Bond Funds' true exposure to subprime assets because they do not take into account the full notional exposure obtained through the TRS and the ABX Index. As stated above, by May 31, 2007, the IBF and GCBF respectively had exposure to subprime assets that totaled 143% and 151% of the net asset value of their funds.

In addition, as of March 30, 2007, over 90% of the notional value of the derivatives in the IBF was attributable to subprime. (*See* DX 351, Ex. 6.) In the GCBF, the number was approximately 76%. (*Id.*) By June 29, 2007, the ostensible percentage of the notional value of derivatives attributable to subprime decreased to approximately 60% in the IBF and 51% in the

¹³ Mortgage Backed Securities ("MBS") refer to securities backed by mortgages to prime borrowers. (Tr. 1126:12-18 (Carron testimony).)

GCBF, (*see id.*), but the decrease is attributable to the addition of the high-notional, low risk interest rate trades that State Street purportedly put on as a hedge against subprime. But as discussed above, those trades had very little effect on the risk and potential reward in the portfolios, and as such, hardly can be said to serve as a source of diversification under these circumstances.

With respect to internal diversification, State Street believed that home-equity ABS were inherently diversified because the underlying securities were composed of mortgages that came from different geographical locations, were originated by different issuers, and were managed by different servicers. (Tr. 1134:18-1135:7 (Carron testimony).)

Prior to the 2007 crisis, employment patterns, income growth, and housing prices tended to be local phenomena in the United States. (Tr. 1133:10-15 (Carron testimony).) As a result, adverse conditions in one area of the country would not have been expected to be correlated with adverse conditions elsewhere in the country. (*Id.*) And while 50% of the mortgage-collateral underlying the assets in the Bond Funds was concentrated in approximately four states, that concentration was roughly proportional to the concentration of subprime mortgages issued in the United States as a whole. (Tr. 1137:1-10.) Notably, however, California subprime mortgages made up about 25% of the mortgage collateral in the LDBF, (DX 351, Ex. 12), and in 2007, State Street analysts had indicated a desire to avoid exposure to California mortgages due to inflated home prices and highly leveraged borrowers in that state. (Tr. 692:2-14 (Flannery testimony).)

On the other hand, geographical diversity would not protect investors from the effects of a broad decline in housing prices, which, while quite rare, would not have been unprecedented. (Tr. 71:25-72:18 (Blume testimony).) The evidence showed that housing prices had declined in

1991, but that home price appreciation otherwise had remained positive (or at least flat) since approximately 1941. (Tr. 72:8-18 (Blume testimony); PX 18, Ex. 3.)

In any event, a concentrated bet in any off-index category increases the risk of a significant loss in comparison to a portfolio's benchmark, (*see* Tr. 97:8-13 (Blume testimony)), and State Street was aware of this idea of "sector risk." Prospectuses for State Street mutual funds (which were reviewed by State Street investment managers) provided, "A Fund is subject to greater risk of loss as a result of adverse economic, business or other developments than if its investments were diversified across different industry sectors." (PX 217.)

III. State Street's Knowledge and Handling of the Risks in the Subprime Market Leading up to the 2007 Crisis

State Street's alleged imprudent management of the Bond Funds occurred during the time leading up to the subprime crash that began in July 2007. As PRIAC's expert Dr. Christopher Culp testified, "I would agree and have said several times publicly that I believe the magnitude and timing of the crisis was unpredictable." (Tr. 521:9-11.) Accordingly, the Court must take care not to evaluate the prudence of State Street's actions using the benefits of hindsight. That does not mean, however, that the Court must ignore evidence that should have alerted State Street to the risks it was incurring in the time leading up to the Plans' redemptions from the Bond Funds.

A. General Background

Between the early 1990s and 2005, the share of mortgage originations attributable to subprime loans grew significantly. In the mid-1990s, subprime mortgages accounted for approximately 3% of mortgage originations; by 2005, that amount had increased to 20%. (Tr. 69:22-25 (Blume testimony).) As the number of subprime mortgages increased, underwriting standards for those mortgages became less strict. (Tr. 70:1-3.) In addition, mortgage originators

created products that allowed borrowers, for example, to avoid paying principal when it was inconvenient for them to do so and also permitted borrowers to make smaller and smaller down payments. (Tr. 70:3-9.) By 2006, the average down payment on a subprime mortgage was only 6%. (Tr. 70:6-7.) As the underwriting standards eased, the credit quality of the subprime mortgages decreased, thus increasing the risk of securities backed by those mortgages. (*See* Tr. 70:13-71:7.)

B. State Street's Knowledge in 2006

In March 2006, Sean Flannery, SSgA's Chief Investment Officer ("CIO"), created a new position within SSgA and called it "Director of Credit Policy." (PX 207.) Flannery offered the position to another State Street employee named Dan Stachel. Regarding the position, Flannery wrote, "This new role also gives us a point person in the case of a credit crisis (which I believe is a much higher probability today than a year ago)." (*Id.*) Part of Stachel's role as Director of Credit Policy was to "[p]rovide independent counsel to senior managers in Cash Management, as well as CIO, North America [i.e. Flannery]; ongoing monitoring of credit markets and special projects." (*Id.*)

In May 2006, Flannery sent an email to other SSgA executives expressing his concern about the mortgage market. In the email, Flannery wrote, "Given the recent significant increase in mortgage foreclosures and general weakening in real estate, I am concerned with our exposure to risk in that market. I would like you all to review this issue and revert to me with analysis on the issue." (PX 143.)

In response, State Street's Collateralized Debt Obligations ("CDO") team prepared a presentation for Flannery that addressed his concerns. (*See* PX 178.) The presentation acknowledged that there was negative data about the housing market. (*See id.* at SS000287632

(“New Home Sales are falling . . .” (ellipsis in original)), *id.* at SS000287663 (“Home Prices are falling . . .” (ellipsis in original)); *id.* at SS000287634 (“Housing Affordability is mixed . . .” (ellipsis in original)); *id.* at SS000287665 (“Mortgage Interest Rates are rising . . .” (ellipsis in original)); *id.* at SS000287666 (“Delinquencies and Foreclosures are rising . . .” (ellipsis in original)).) The presentation also pointed to factors that led the SSgA team to “remain constructive on the housing market.” (*Id.* at SS000287667.) Those factors included product innovation in the subprime lending market, low volatility in interest rates, an unemployment rate that was consistent with the Federal Reserve’s definition of full employment, and the fact that, according to the presentation, home price appreciation had not been negative since 1972. (*Id.* at SS000287640-44.)

Stachel, the newly appointed Head of Credit Policy, expressed concerns about the mortgage market to Flannery in 2006. Based on his discussions with industry peers and on information learned through the S&P Structured Finance Investor Council, Stachel became “much more convinced that we were going to see some really significant disruption for certain companies and certain securities,” and he expressed that view periodically to Flannery well before 2007. (*See* Stachel Dep. 59-60.)

C. State Street’s Knowledge and Actions in 2007

1. The Events of February 2007

In February 2007, the subprime market experienced a period of significant volatility and illiquidity. In an email to other State Street employees, Jim Hopkins, a product engineer at State Street, offered his take on what happened:

Briefly, the subprime housing market has been plagued by negative headlines in the media. The hedge fund community seized upon these negative reports and began to use [the ABX] Index as a means of expressing a negative view (i.e. shorting) on the U.S. housing market. A combination of thin volume and one-way

hedge fund activity has led to extreme market volatility that has paralyzed value-oriented investors from entering the market. This has led to extreme illiquidity in the market, which has translated into unprecedented transaction costs.

(PX 171.)

The market disruption had the most significant impact on State Street's BBB ABX trade. During this time, the price of the BBB ABX dropped substantially and the "implied spread"—a measure of the market's perception of the riskiness of a security¹⁴—on the BBB ABX rose substantially. The price of the BBB ABX dropped from 95.5 on January 5, 2007 to 77.5 on February 26, 2007, a decline of nearly 19%. (*See* PX 171, at SS000160724-25.) The implied spread on the BBB ABX increased from 278 basis points on January 5, 2007 to 958 basis points on February 26, 2007. (*Id.*) By comparison, the average implied spread for a credit default swap on a CCC rated corporate bond at that time was 390 basis points. (*Id.*) Corporate bonds rated CCC are not considered "investment grade." (Tr. 664:3-6.) Indeed, Sean Flannery, SSgA's CIO, acknowledged that the BBB ABX was "trading well through distressed debt" levels at that time. (PX 128.) The implied spreads on the BBB ABX remained above 700 basis points through the end of May 2007. (*See* PX 18, Ex. 8B.)

The disruption also had an impact on the AA and AAA subindices of the ABX Index. A chart prepared by PRIAC's expert Dr. Marshall Blume reveals that implied spreads on the AA ABX Index spiked from approximately 12 basis points at the end of January 2007 to over 90 basis points in early March 2007, before declining to approximately 30 basis points by the end of May. (*See* PX 18, Ex. 8B.) The implied spreads on the AAA ABX Index rose from about 10 basis points at the end of January to just over 30 basis points at the end of February, before declining to approximately 20 basis points by the end of May. (*See id.*)

¹⁴ "Implied spread" refers to "the yield on a particular instrument less the one month LIBOR rate." (Tr. 76:15-16.) A higher implied spread indicates that the market perceives that particular instrument to carry more risk than an instrument with a lower implied spread. (*See* Tr. 77:6-11.)

State Street's investments in other AA and AAA home equity ABS also were affected by the disruption, though not as significantly as the ABX Index. Implied spreads on AAA ABS widened from 15.1 basis points on February 28, 2007 to 22.5 basis points on March 23, 2007, an increase of more than 50%. (*See* PX 193, at SS000458153; *see also* DX 352, Ex. 6.) Implied spreads on AA ABS widened from 32.5 basis points on February 28 to 52.9 basis points on March 23, an increase of more than 62%. (*See* PX 193, at SS000458153; *see also* DX 352, Ex. 6.) The spreads on AAA and AA ABS subsequently decreased, and by June 2007 spreads on those securities were the same as they were in June 2006. (*See* DX 352, Ex. 6.)

As a result of the market turbulence in February 2007, State Street's Risk Management unit took over the risk modeling of the ABX trades from the Bond Funds' portfolio managers. (*See* PX 659, at SSgA-CIV000802084.) As discussed above, State Street originally used the underlying cash bonds as a proxy to model the risk of the ABX trade, but the "proxy" provided an unreliable picture of the real risk of the instrument.

Risk Management's updated model for the ABX trade showed a substantial increase in the risk of the instrument because it calculated the trade's risk using data from the ABX instrument itself and by giving more weight to recent events, which included the substantial volatility and sharp decrease in price that occurred in February 2007. (Tr. 779:6-10 (Reigel testimony); *see* Tr. 1010:19-1011:7 (Armstrong testimony).) The risk model for the ABX trade measured risk using two figures: value-at-risk (or "VaR") and conditional-value-at-risk (or "CVaR"). (*See* Tr. 390:23-391:9 (Culp testimony).)

VaR can be defined as "a way of expressing potential loss over a specific period of time with a specific degree of confidence." (Tr. 382:7-9 (Culp testimony).) For example, if an entity

calculates a VaR of \$1 million, that means the entity expects that in 95% of cases over a specified period of time, it will lose no more than \$1 million. (Tr. 382:11-17 (Culp testimony).)

CVaR deals with the other 5% of cases, or “tail events.” (See Tr. 383:11-15.) CVaR, which is also known as Expected Shortfall (or ESF), is a measure of the average loss the entity may expect to occur in those 5% tail events. CVaR does not provide any insight into what the maximum loss might be in a worst-case-scenario tail event. (Tr. 383:24-384:6 (Culp testimony).)

In January 2007, before Risk Management took over the modeling of the ABX trade, State Street calculated the BBB ABX Index to have a CVaR of 200.7 basis points; in February 2007, after Risk Management updated the risk model, the BBB ABX’s CVaR increased to 2125 basis points, an increase of more than 1000%. (*Compare* PX 601, at SSE000000816 (Excel spreadsheet tab labeled “jan07,” rows 299-304, column M), *with* PX 601, at SSE000000816 (Excel spreadsheet tab labeled “feb07,” rows 306-11, column M).) The updated CVaR calculation indicated that in a “tail event,” State Street believed that the ABX BBB would suffer an average loss of just over 21% of its value.

Between March and June of 2007, the ABX BBB’s CVaR ranged from 1400 basis points to 1900 basis points. (See PX 601.) By comparison, between February and June 2007, State Street’s calculation of the CVaR for the AA ABX ranged only from 31 to 33 basis points. (See, e.g., PX 601, at SSE000000816 (Excel spreadsheet tab labeled “feb07,” rows 292-97, column M); PX 601, at SSE000000816 (Excel spreadsheet tab labeled “june07,” rows 204-09, column L).) In July 2007, however, the CVaR on the AA ABX increased to 210 basis points. (See PX 601.)

In early August 2007, the Risk Management team re-modeled the risk of the home-equity TRS using an approach similar to the approach used to re-model the ABX trade. (See Lindner

Dep. 357-60.) The result, like in the case of the ABX, was a significant increase in the TRS's CVaR. (*See* PX 378; PX 18, Exs. 22, 33.)

Risk Management's decision to recalculate the risk of these subprime instruments had a significant impact on the Bond Funds' use of their risk budgets, which is a topic that is discussed in more detail below.

Along with Risk Management's decision to take over modeling the risk of the ABX trade came its recommendation to the portfolio managers to reduce exposure to subprime assets. As Patrick Armstrong, the Head of Risk Management, wrote in his 2007 year-end self-evaluation,

The Investment Risk Management team assumed the modelling [sic] of the risk in the ABX trade from the bond team in February 2007. We notified the Investment team of the greatly heightened risk in the trade, and the adverse risk/return relationship, yet the Investment team chose to continue with the trade. It was our position to reduce sub-prime exposure prior to and throughout the market crisis.

(PX 659, at 9; *see also* Tr. 1006-07 (Armstrong testimony).)

2. State Street's Conduct Following the February Volatility

In March 2007, the Bond Funds did reduce their positions in the BBB ABX, but did not abandon the position entirely because the portfolio managers believed the trade still had value. (Tr. 780:19-781:5 (Reigel testimony); *see also* PX 131.) State Street believed that the trade still had value because, in State Street's view, the price volatility of the BBB ABX Index was driven by "technical" supply and demand forces, such as large-volume hedge fund shorting. (Tr. 559:14-560:5 (Flannery testimony).) State Street did not believe that the volatility reflected concerns about the fundamental characteristics of the subprime sector because the cash bonds underlying the ABX Index were not as severely affected. (Tr. 557:25-561:4 (Flannery testimony).)

State Street continued to hold this view well into July 2007, when the BBB ABX's CVaR increased to 3924 basis points, (*see* PX 601, at SSE000000816 (tab labeled "jul07")), and Moody's and S&P announced downgrades "across the 2006 subprime vintage," (PX 224), including on some of the securities underlying the BBB ABX. (*See* PX 509 (July 24, 2007 email: "[F]rom a fundamental perspective we remain constructive on 06-2 ABX. Although there have been downgrades on the underlying securities at the A, BBB and BBB- levels, we believe that current pricing at all rating levels is overstating the level of risk embedded in the underlying securities.").)

State Street received additional warnings about the subprime market throughout the spring of 2007. For example, Dan Stachel informed Flannery during that time that the subprime market in sum and substance was "in a bubble and very vulnerable." (Tr. 650:9-651:5.) State Street also received warnings from State Street's Cash Desk about the deterioration in the quality of subprime securities, (Tr. 704-06), and from State Street's Asset Liability Committee (a division of the State Street bank) about "deterioration in underwriting standards" in home-equity ABS, (PX 687; Tr. 697-82).

On April 10, 2007, Flannery wrote in an email to Ed Resch, the Chief Financial Officer of the State Street Corporation,

I do think it is important to remember that it is fairly likely that we, and the markets, will be wrestling with mortgage-related issues for some time and risk levels (and premia) are elevated, so we may take some bruises along the way. We believe that our process is robust enough to capably weather the storm and find opportunities to add value along the way.

(PX 697.) Flannery testified that he understood the term "bruises" to mean "losses in value." (Tr. 676:18-20.)

Days later and despite the recent volatility, State Street's "process" led it to increase the Bond Funds' positions in the BBB ABX. The Bond Funds made direct purchases of the BBB ABX during that time, and also obtained additional exposure when the LDBF increased its position in the BBB ABX in April. (PX 131; Tenczar Dep. 384-87.) In June, the LDBF made additional purchases of the BBB ABX, which further increased the Bond Funds' exposure to the instrument. (PX 131; Tenczar Dep. 384-87; *see* PX 477, at SS007367441, SS007367443, SS007367445 (showing a log of all transactions in the BBB ABX).)

As discussed above, between the end of March 2007 and the end of June 2007, the IBF increased its total subprime exposure by approximately \$400 million, from \$1.4 billion to \$1.8 billion. This increase included a \$200 million increase in TRS; an \$81 million increase in ABX exposure, including a \$19 million increase in BBB ABX exposure; and a \$164 million increase in exposure to subprime-backed cash bonds. In June and July of 2007, State Street also purported to add Eurodollar and LIBOR basis swaps as a hedge against subprime, (*see* Tr. 805-06 (Reigel testimony)), but, as discussed above, those trades were not a hedge against credit risk and, in any event, were ineffective.

Susan Reigel admitted that managing the Bond Funds in a more passive style would have controlled risk during these times of significant volatility.¹⁵ (Tr. 877:14-25.) However, she rejected that approach as "not doing your job." (Tr. 896:24). The Bond Funds' alpha target, however, was a goal of the funds; the Bond Funds' Fund Declarations required only that the funds "match or exceed" their benchmarks. Taking a more passive approach in a volatile market would have been consistent both the Fund Declarations and with the "risk-controlled" strategy described by State Street in presentations to PRIAC.

¹⁵ A State Street mutual fund had adopted such an approach between 2002 and 2004 in response to a volatile market. (*See* DX 147.)

3. State Street's Compliance with Internal Policies

a. State Street's Risk Budgeting Policy

As PRIAC's expert Dr. Culp testified, "Risk budgeting is quite like financial budgeting. In a financial budget you are trying to allocate expenditures. In a risk budget you are trying to allocate risk." (Tr. 385:6-8.) Further, "In a typical risk budget an organization decides how much risk it's willing to tolerate, for example, by fund, and then allocates a certain amount of risk capital to that fund, where risk capital is essentially . . . the amount of loss absorption capacity allocated to the portfolio." (Tr. 385:9-13. (Culp testimony).)

State Street employed a risk budgeting system for the Bond Funds. (Tr. 390:20-22 (Culp testimony).) The Bond Funds' risk budget was a function of their alpha target and information ratio, which "by immediate implication . . . defined a target tracking error, and then a risk tolerance." (Tr. 391:2-5 (Culp testimony).) The amount of the risk budget's risk capital utilized by the Bond Funds in turn was determined by an instrument's CVaR. (*See* Tr. 391:6-9 (Culp testimony).)

Dr. Culp testified about the Bond Funds' "persistent systematic violations" of their risk budgets. (Tr. 398:20-21.) The evidence showed that with the exception of a short period of time in October 2006, both of the Bond Funds consistently exceeded their risk budgets between May 2006 and July 2007. (*See* PX 16, Ex. 7.) The excess is especially apparent in March of 2007, which is the time immediately after Risk Management provided an updated risk model of the ABX trade. At that time, the Bond Funds were using nearly 200% of their monthly risk capital. (*See id.*) Even after State Street increased the risk budgets in both the LDBF and the Bond Funds between March and June, the Bond Funds continued to utilize nearly 150% of their monthly risk capital at the end of July 2007. (*See* Tr. 391-93; 514-15 (Culp testimony).)

Patrick Armstrong testified that the Bond Funds' risk budgets operated under the assumption that all positions had "a correlation of one," which Armstrong testified is a very conservative assumption. (Tr. 925:5-926:3.)¹⁶ He also testified that if the true correlation figures were used, the Bond Funds would not have exceeded their risk budgets until July or August of 2007. (Tr. 927:2-9.) In addition, Susan Reigel, the portfolio manager for the GCBF, testified that but for the BBB ABX trade, the Bond Funds would have stayed within their risk budgets, even assuming a correlation of one. (Tr. 781:17-784:4.) But as PRIAC's expert Dr. Culp testified, the purpose of a risk budget "is to set aside capital to absorb unanticipated and unanticipatable events," (Tr. 520:25-521:1), and using a correlation of one seems entirely consistent with that purpose. Moreover, the Bond Funds' risk budget—which was calculated as a function of the Bond Funds alpha target (approximately 75 basis points in 2007) and its targeted information ratio (0.5) (*see* Tr. 391:2-5 (Culp testimony))—would have reflected risk tolerance based on a target tracking of 150 basis points, which, as discussed above, is a figure that was never disclosed to PRIAC and which PRIAC was not obligated to assume State Street had adopted. Accordingly, even if Armstrong's and Reigel's testimony is accurate, the Bond Funds' nonetheless were incurring risks in excess of the risk profile State Street presented to PRIAC.

b. State Street's Stop Loss Policy

In addition to its risk budgeting policy, State Street utilized another risk management tool known as a stop loss policy. The policy required that State Street take certain actions when a particular trade passed through either a "soft stop" or a "hard stop." (*See generally* PX 704.) A trade's soft stop was defined as its VaR, while a trade's "hard stop" was defined as its CVaR.

¹⁶ A correlation of one means that State Street assumed that if one position declined in value, all other positions similarly would decline in value. (Tr. 181.) Dr. Blume testified that assuming a correlation of one is customary when analyzing a portfolio's risk with respect to its holdings' CVaRs. (*Id.*)

(*See id.* at 4.)¹⁷ When a trade passed through a soft stop, State Street’s policy provided that “discussion within the portfolio management team is warranted to determine whether to terminate the trade immediately or to continue with the strategy by hedging it, add to it or reducing it.” (*Id.*) When a trade passed through a hard stop on the other hand, “the decision is removed from the portfolio management team’s discretion and turned over to senior management within the Global Fixed Income group to determine immediate action.” (*Id.*) The decisions of the “senior management” group were required to be “documented and file[d].” (*Id.*) “Senior management” for purposes of the policy consisted of five individuals: the Director of Global Fixed Income, the Director of North American Fixed Income, the Head of Active U.S. Bonds, the Head of Risk Management, and the Head of Credit Research. (*Id.*) At the times relevant here, those positions were occupied by Paul Greff, Michael Wands, Michael O’Hara, Patrick Armstrong, and Matthew Steinaway.

The evidence showed that the BBB ABX went through its hard stop in February, June, and July 2007. (*See* Tr. 408:2-8 (Culp testimony).) The evidence also showed that the AA ABX went through its hard stop in early July 2007, (Tr. 992 (Armstrong testimony); PX 188), and that the AAA TRS went through its hard stop sometime in July as well, (Tr. 837:23-838:15 (Reigel testimony).)

On July 9, 2007, Paul Greff and Patrick Armstrong informed Sean Flannery that “[n]otification of reaching the Stop Loss positions was conducted in a manner that was casual rather than the formal process outlined in the Fixed Income Policy Manual. Not all individuals as outlined in the policy were notified of the stop loss being reached or included in subsequent discussions.” (PX 123.) That statement appears largely to be true.

¹⁷ As suggested above, the portfolio managers at State Street modeled the risk of their trades (and thus calculated the VaR and CVaR for those trades) unless the Risk Management group took over the task of modeling the risk of a particular trade, as occurred in the case of the BBB ABX and eventually the TRS. (*See* Tr. 778-79 (Reigel).)

While the evidence showed that some of the five members of the senior management “stop loss committee” held discussions about the BBB ABX trade after it passed through its hard stop, (*see* Tr. 942-43; 1035-36 (Armstrong testimony)), the discussions indeed appeared to be “casual,” rather than “formal,” as contemplated by the policy. (PX 123.) For example, the evidence of the June discussions of the BBB ABX trade consists largely of emails between senior managers focusing on what the stop loss level on the BBB ABX *was*, rather than on what should be done about the trade. (*See* PX 134; PX 267; PX 190.) The evidence of the July discussions reveals that after the AA ABX and the BBB ABX moved through their hard stops on July 11, the portfolio managers maintained discretion over the trades. (*See* PX 188 (email from Paul Greff: “[T]he AA (roughly 250mm) and BBB (roughly 210mm) ABX positions moved through their hard stops on 7/11. [T]he PMs are considering lightening up on both positions and/or hedging them with other vehicles.”).) The evidence also showed that about two weeks later Greff, acting alone, made the decision that the BBB ABX positions should be sold. (*See* PX 358; Tr. 861 (Reigel testimony).) In addition, none of senior management’s stop loss discussions (to the extent they occurred) were documented and filed, as required by the policy.

There also is no evidence that senior management was notified of, or discussed, the AAA TRS trade after it moved through its hard stop in July. The Bond Funds continued to hold the AAA TRS until the Plans redeemed their interests in the Bond Funds in late August 2007, and State Street acknowledged that the AAA TRS “caused large losses” in the Bond Funds. (*See* PX 561, at 6.)

In addition, until late June 2007, Matthew Steinaway was not aware that a “stop-loss committee” existed, let alone that he was one of its members. (PX 482.) The only stop loss meeting in which Steinaway participated was one that occurred in early July 2007. (*Id.*)

Although Steinaway testified that he did not have a view on the ABX trade specifically, (Tr. 426-27 (recounting Steinaway's deposition testimony)), the policy was not limited only to those members of "senior management," (PX 704, at 4), that had a particular view on the trade at issue. Indeed, the stop loss policy appears to be predicated on the presence of "independent voice[s]," (Tr. 523:18-25 (Culp testimony)), and, as Steinaway himself stated, his group's "opinion on this market [i.e. the subprime market] was fairly clear as the Cash desk has not been active purchasers of sub-prime HEQs for approximately one year." (PX 482.) Evidence of senior management's failure to document and file its discussions and its failure to include Steinaway in some of the stop loss discussions is sufficient to warrant a conclusion that State Street violated its own stop loss policy. Nonetheless, there is little evidence to suggest what effect documenting the group's discussions or including Steinaway from the outset would have had on the Bond Funds' portfolio, especially since Patrick Armstrong, another "independent voice," was included, and he had expressed to the fixed income managers Risk Management's view that "It was our [Risk Management's] position to reduce sub-prime exposure prior to and throughout the market crisis." (PX 659, at 9.)

On the other hand, at a meeting of the fixed income group on September 6, 2007, Michael Wands made clear in his handwritten notes that State Street's less-than-robust compliance with its risk management policies impacted its management of its fixed income portfolios. Taking notes on the comments of Paul Greff and others, Wands wrote, "[S]hould have been faithful to our risk mgmt/budgeting process: would have cut risk sooner, would have lowered risk in the strategy; would have bailed on trades sooner." (PX 706; *see* Wands Dep. 255.)

c. State Street's Active Trade Template Policy

In October 2005, State Street implemented an “important new procedure” known as the “Global Fixed Income Active Bond Trade Recommendation Delivery Guideline,” otherwise known as the “Active Trade Template” policy. (PX 190, at 2.) The policy required portfolio managers to fill out a template before executing a trade. (*Id.* at 3.) The template required the portfolio manager to provide certain information about the trade, including, as relevant here, the stop loss level for the trade. (*Id.*) The portfolio manager then was required to distribute the template by email to all of State Street’s fixed income personnel before executing the trade. (*Id.*) The stated purpose of the policy was “to ensure that we maintain our existing high fiduciary standards.” (*Id.*) State Street’s CIO Sean Flannery testified that the purpose of the policy was to guard against “front-running”¹⁸ and also to communicate to the global trading desks potential investment opportunities. (Tr. 743-46.)

The template also may have been a way to make State Street personnel aware of the hard stop level for a particular trade; however, it was not the only way for State Street personnel to obtain that information. The evidence showed that a trade’s hard stop level (or CVaR) was available in readily accessible databases, even if an Active Trade Template had not been completed. (Tr. 950-51 (Armstrong testimony); 786 (Reigel testimony).) And while the template may have been a convenient way for State Street to learn that a particular trade had been made, the template would not have indicated whether and when a hard stop had been reached.

In June 2007, Michael Wands sent an email on behalf of himself and Patrick Armstrong to Paul Greff discussing their concern with State Street’s lack of adherence to the Active Trade

¹⁸ “Front-running” refers to a situation where one buyer intentionally trades in front of another, larger, buyer in order to take advantage of any benefit the larger buyer’s purchase generates in the market. (*See* Tr. 745:2-8 (Flannery testimony).)

Template policy, particularly with respect to the ABX trade. (*See* PX 190.) Specifically, Wands wrote,

I think that unless we have some sort of process in place like this [i.e. the Active Trade Template policy], it becomes impossible for you, Patrick and I to do our jobs in regards to monitoring the more riskier [sic] positions in the funds. It's too risky to assume that portfolio managers are always acting within the risk parameters of their portfolios and will notify all of us if a trade moves through it's [sic] stop loss level.

(*Id.* at 1.) Wands's email undoubtedly reflects concern about the adequacy of State Street's procedure for notifying senior management after a trade passes through its hard stop, but the Active Trade Template policy does not deal with that issue, and Dr. Culp expressed no opinion on whether State Street's policy for communicating the occurrence of a stop loss trigger was itself inappropriate. (Tr. 492:5-17 (Culp testimony).) Accordingly, although the evidence showed instances where the Active Trade Template policy was not followed, (*see* Tr. 487-88 (Culp testimony)), the evidence did not show that the violations had an appreciable impact on the Bond Funds' portfolios.

4. State Street's Disclosures to Investors Through June 2007 Did Not Reflect the Full Extent of the Bond Funds' Exposure to Subprime

The evidence presented at this phase of the trial showed that State Street did not disclose fully the size or nature of the Bond Funds' exposure to subprime securities before the end of June 2007.¹⁹

State Street disclosed that the Bond Funds employed a certain concentration in "ABS," but there was little evidence to suggest that State Street ever revealed to investors that the Bond Funds' concentration in ABS consisted almost entirely of home-equity (or subprime) ABS. As discussed above, by the end of May 2007, 96% of the GCBF's ABS exposure and 99% of the

¹⁹ The Court expresses no opinion on the adequacy of State Street's disclosures following this time, evidence of which has not been presented to the Court at this phase of the trial.

IBF's ABS exposure were to subprime home-equity ABS, (Tr. 96:20-23 (Blume testimony).), while, by comparison, subprime ABS constituted only 39% of the Lehman Brothers Floating Rate ABS Index. (Tr. 96:24-97:3.)

State Street provided quarterly commentary on the Bond Funds to PRIAC, and a number of those commentaries contained references to the Bond Funds' exposure to "home-equity," which PRIAC understood to refer to subprime ABS. (*See* PX 25 (commentary from the first quarter of 2006: "[W]e still think spreads on home equity look attractive. We will maintain our existing triple B exposure and look for levels at which to increase our exposure here."); DX 459 (commentary from the second quarter of 2006: "Our various overweights to the home-equity market, both high quality as well as triple Bs, tightened."); DX 87 (commentary from the third quarter of 2006: "Long home-equity exposure in the asset backed sector also added to performance.")). After the first quarter of 2007, State Street provided a commentary to PRIAC that included a discussion of the impact on the bond market of the "turmoil that has occurred in the sub-prime mortgage industry," and also indicated that the Bond Funds' "under-performance was primarily driven by exposure in the triple B asset-backed securities market." (DX 170.) These references to "home-equity" undoubtedly indicate that the Bond Funds held positions in subprime securities and that those positions were overweight compared to the Bond Funds' benchmarks (which contained no ABS at all, (*see* PX 18, Exs. 9, 11)), but they do not convey the fact that nearly all of the Bond Funds' ABS exposure was to home-equity. The references to "home-equity" in the commentaries occurred in the context of broader discussions about the Bond Funds' overall performance, and they do not reveal State Street's decision to stake nearly all of the Bond Funds' off-index exposure in that single asset class.²⁰

²⁰ State Street's monthly performance reports reflect that the Bond Funds' off-index exposure was obtained almost entirely through ABS, but, like the quarterly commentaries, the performance reports do not reflect State Street's

State Street also did not disclose fully the extent to which the Bond Funds employed leverage to gain exposure to the home-equity ABS sector. Robert Frasonca testified that he was aware that the Bond Funds may use leverage. (Tr. 273:12-18.) Frasonca also testified that in his experience enhanced index funds generally may use leverage, but “[w]hatever leverage there is . . . shouldn’t be adding or contribute to the risk profile of the fund in a meaningful way.” (Tr. 273:3-8.) State Street also made Prudential aware of “swap overlay” strategies that could be used to create leverage, (Tr. 310:24-311:2 (Frasonca testimony)), and that the Bond Funds would seek to earn a quarter of their alpha from “financing opportunities and enhanced cash,” (DX 147), which State Street’s expert Dr. Carron testified refers to the use of leverage. (Tr. 1105:1-12) But none of these disclosures reflect the fact that State Street chose to invest the Bond Funds in subprime derivatives (i.e. TRS and the ABX Index) whose total notional exposure equaled over 100% of the net asset value of each Bond Fund.

Indeed, beginning in early 2005, State Street’s disclosures about the Bond Funds’ sector allocations did not reflect leverage at all. At that time, State Street decided to “normalize” the sector percentages in its reports to investors so that they would total 100%, even if the funds’ actual market exposure exceeded the net asset value of the fund. (Tr. 880 (Reigel testimony).) Susan Reigel admitted that this sort of disclosure was “skewing the actual weights” in the portfolios, (Tr. 880), and Patrick Armstrong, in an email, described the practice as “indefensible,” (PX 504). State Street itself admitted that investors could not easily determine the amount of leverage used in its funds. In response to a questionnaire from a client that asked, “Given your standard client performance reports, can investors easily determine the derivatives positions in the portfolio and the amount of leverage that is being used?”, State Street answered,

decision to concentrate nearly all of its ABS exposure in home-equity. (*See* DX 394, at PRU-SSGA00740981 (showing sector weights for the GCBF); *id.* at PRU-SSGA00740983 (showing sector weights for the IBF).)

“No,” but then added that investors “are aware of the overall risk profile of their portfolios, which is what we think is most important.” (PX 284.) But as discussed earlier, State Street had not made PRIAC aware in 2007 of the true risk profile of the Bond Funds.

IV. The Bond Funds’ Losses

The volatility in the subprime market increased in July and August of 2007, and the Bond Funds suffered a sharp decline in value. By September 5, 2007, the Plans had redeemed their interests in the Bond Funds.

Between June 1 and August 31, 2007 (the dates PRIAC uses to measure damages), the IBF lost 16.9% of its net asset value. By comparison, its benchmark gained 2.2%. Similarly, the GCBF lost 23.9% of its net asset value, while its benchmark gained 2.1%. (Tr. 102:15-103:9 (Blume testimony); *see* PX 18, Exs. 30, 31.)

PRIAC presented evidence of the Plans’ losses by comparing what they earned in the Bond Funds between June 1 and August 31, 2007 with what they would have earned if the Plans’ entire investments in the Bond Funds had been invested in a prudently managed alternative vehicle during that time. PRIAC identified two mutual funds as the prudently managed alternatives for the Bond Funds. The two mutual funds were: (1) the Accessor Intermediate Fixed-Income Fund (the “Accessor Fund”) and (2) the Baird Intermediate Bond Fund (the “Baird Fund”). (*See* Tr. 449-50 (Fischel testimony).) The Accessor Fund was used to measure losses for the GCBF, and the Baird Fund was used to measure losses for the IBF. (*Id.*)

PRIAC selected the Accessor Fund and the Baird Fund by using the Morningstar Principia database²¹ to search for mutual funds that Morningstar had categorized as both intermediate-term bond funds and “enhanced index funds.” (Tr. 449:4-10 (Fischel testimony).)

²¹ The Morningstar Principia is a “standard data source” that collects data on thousands of publicly traded mutual funds. (Tr. 450:5-11 (Fischel testimony).) PRIAC’s expert Professor Daniel Fischel testified that the Morningstar Principia database is “the most recognized database in the industry.” (Tr. 464:1-2.)

The search revealed nine mutual funds. (Tr. 449:11 (Fischel testimony).) PRIAC then identified funds within the group of nine that used the same benchmarks as the Bond Funds at issue. (Tr. 449:17-450:4 (Fischel testimony).) The Accessor Fund and the Baird Fund were the only funds that met the criteria. (*Id.*)

Unlike the Bond Funds, the Accessor Fund and the Baird Fund did not use leverage. (*See* PX 18, Ex. 20.) They did, however, invest in off-index securities. In May 2007, the Baird Fund, for example, had exposure to ABS totaling 7% of the net asset value of the fund and exposure to MBS totaling 17% of the net asset value of the fund. (PX 18, Ex. 18.) The Baird Fund's remaining assets were invested almost entirely in securities contained in its benchmark. (*Id.*) The Accessor Fund had exposure to ABS totaling 14% of the net asset value of the fund²² and exposure to Commercial Mortgage Backed Securities totaling 24% of the net asset value of the fund. (PX 18, Ex. 19.) Like the Baird Fund, the Accessor Fund's remaining assets were invested in benchmark securities. (*Id.* Ex. 19.)

Based on the performance of the Baird Fund and the Accessor Fund in comparison to the State Street Bond Funds, PRIAC's expert Professor Daniel Fischel calculated the Plans losses as follows: the Plans that invested in the IBF suffered \$51,591,012 in losses, and the Plans that invested in the GCBF suffered \$25,142,867 in losses. Thus, PRIAC calculated the total losses suffered by the Plans to be \$76,733,879.

Professor Fischel also offered an alternative calculation of losses assuming that the Plans would have invested in the best-performing PRIAC fund, rather than in funds with benchmarks identical to those of the Bond Funds. That calculation yielded total losses for the Plans of \$85,798,084. (Tr. 455:1-20.) Similarly, Professor Fischel also calculated losses assuming that

²² The record does not make clear what portion of the Baird and Accessor Funds' ABS exposure is to subprime ABS; however, given the makeup of the Lehman Brothers Floating Rate ABS Index, it is reasonable to infer that at least 39% of that exposure is to subprime. (*See* PX 18, Ex. 15.)

the Plans would have invested in the Bond Funds' benchmark indices. That calculation yielded total losses of \$80,832,385. (Tr. 455:21-456:5.)

In locating comparable funds, Professor Fischel relied on Morningstar's classification of the Baird Fund and the Accessor Fund as "enhanced index funds." (460:13-18.) Professor Fischel then examined the prospectuses of those funds to ensure that the funds employed "a basic meet-or-exceed criteria that defines what an enhanced index fund is." (Tr. 461:6-23.) Professor Fischel did not examine the Baird Fund's and the Accessor Fund's alpha targets or target tracking errors in identifying them as comparable funds. (Tr. 462:10-22; 467:4-12.)

In late August of 2007, PRIAC expressed some disagreement with Morningstar's criteria for labeling a fund an "enhanced index fund." In an email to Robert Frasca regarding possible replacement funds for the State Street Bond Funds, Evan Scussel, a PRIAC employee, wrote,

As you may know, the "Enhanced Index" classification in Morningstar for Intermediate Bond funds is a bit of a misnomer. Both Blackrock and Goldman Sachs are listed as having "Enhanced Index" offerings, but phone conversations with both of them told me that nothing could be farther from the truth of those two funds. Seems as though Morningstar classifies these Funds based on minimal standard deviation of alpha. If the metric is low enough, it's an "Enhanced Index," even if it truly isn't.

(DX 347.) The email suggests that PRIAC believed that Morningstar's classification of enhanced index funds included funds that were more actively managed than an enhanced index fund, in PRIAC's opinion, should be. Professor Fischel testified that he was not aware that PRIAC had expressed this view of the Morningstar database. (Tr. 470:8-11.)

V. Events Occurring After the Commencement of This Litigation

PRIAC commenced this action on October 1, 2007. As explained in this Court's decision on summary judgment, PRIAC obtained authorization from the Plans to prosecute this action on their behalves. In return, PRIAC made a "Special Loan Payment" to each Plan, consisting of an

amount equal to what the Plans would have earned had the return of the Bond Funds equaled that of their benchmarks for a specified period and a portion of the legal fees and expenses incurred in prosecuting the lawsuit. The Plans were not required to repay the Special Loan Payment, except to the extent the Plans received proceeds from this lawsuit. *See In re State Street Bank & Trust Co. Fixed Income Funds Inv. Litig.*, 772 F. Supp. 2d 519, 537 (S.D.N.Y. 2011).

In February 2010, State Street entered into a settlement with the SEC and state regulators to resolve their investigations into losses incurred by some of State Street's active fixed-income strategies during 2007 and earlier periods. (PX 809; PX 810). At the time the settlement was announced, State Street agreed to establish a Fair Fund for "Injured Investors" totaling \$313,191,540. (PX 10, at 2.) Prior to the SEC settlement, State Street already had paid certain amounts to certain "Injured Investors" such that the total compensation paid to all "Injured Investors" totaled \$663,191,540. (*Id.*) As part of the Fair Fund amount, State Street agreed to pay a civil penalty of \$50 million. PRIAC received \$52,552,696.77 through the Fair Fund, and a portion of that amount serves as a credit against damages in this action.

CONCLUSIONS OF LAW

At all relevant times, State Street was an ERISA fiduciary with respect to the Plans and the Plans' assets invested in the Bond Funds because State Street exercised authority and control over management of the Plans' assets. *See* 29 U.S.C. § 1002(21)(A)(i). State Street also was an investment manager under ERISA, and it had acknowledged in writing that it was a fiduciary with respect to the Plans. 29 U.S.C. § 1002(38). (PX 553 (Third Amended and Restated Investment Management Agreement).) State Street therefore was required to act according to the "prudent man standard of care" set forth in section 404(a) of ERISA. 29 U.S.C. § 1104(a).

ERISA section 404(a) provides in relevant part,

[A] fiduciary shall discharge his duties with respect to a plan solely in the interest of the participants and beneficiaries and--

(A) for the exclusive purpose of:

(i) providing benefits to participants and their beneficiaries; and

(ii) defraying reasonable expenses of administering the plan;

(B) with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims; [and]

(C) by diversifying the investments of the plan so as to minimize the risk of large losses, unless under the circumstances it is clearly prudent not to do so . .

..

Id. For the reasons set forth below, the Court concludes that: (1) State Street violated its duty to act prudently, (2) State Street did not violate its duty to act solely in the interest of the Plans, and (3) State Street violated its duty to diversify the investments of the Bond Funds.

I. State Street Violated Its Duty of Care, Skill, Prudence, and Diligence

A. Care, Skill, Prudence, and Diligence Under ERISA

As noted above, State Street was required to act with “the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.” 29 U.S.C. § 1104(a)(1)(B).

“[C]ourts have construed the ‘prudent person standard’ under ERISA as an ‘objective standard, requiring the fiduciary (1) to employ proper methods to investigate, evaluate and structure the investment; (2) to act in a manner as would others who have a capacity and familiarity with such matters; and (3) to exercise independent judgment when making investment

decisions.’” *United States v. Mason Tenders Dist. Council of Greater N.Y.*, 909 F. Supp. 882, 886 (S.D.N.Y. 1995) (quoting *Lanka v. O’Higgins*, 810 F. Supp. 379, 387 (N.D.N.Y. 1992)).

Department of Labor regulations provide that a fiduciary satisfies ERISA’s prudent person standard if the fiduciary

- (i) Has given appropriate consideration to those facts and circumstances that, given the scope of such fiduciary’s investment duties, the fiduciary knows or should know are relevant to the particular investment or investment course of action involved, including the role the investment or investment course of action plays in that portion of the plan’s investment portfolio with respect to which the fiduciary has investment duties; and

- (ii) Has acted accordingly.

29 C.F.R. § 2550.404a-1(b)(1). The regulations further define “appropriate consideration” to include:

- (i) A determination by the fiduciary that the particular investment or investment course of action is reasonably designed, as part of the portfolio (or, where applicable, that portion of the plan portfolio with respect to which the fiduciary has investment duties), to further the purposes of the plan, taking into consideration the risk of loss and the opportunity for gain (or other return) associated with the investment or investment course of action, and

- (ii) Consideration of the following factors as they relate to such portion of the portfolio:

- (A) The composition of the portfolio with regard to diversification;

- (B) The liquidity and current return of the portfolio relative to the anticipated cash flow requirements of the plan; and

- (C) The projected return of the portfolio relative to the funding objectives of the plan.

Id. § 2550.404a-1(b)(2). “As the above regulation makes clear, trustees must investigate proposed investments with regard to risk and return as well as appropriateness in light of the composition and aims of a fund’s portfolio.” *Liss v. Smith*, 991 F. Supp. 278, 298 (S.D.N.Y. 1998).

B. Application

State Street presented the Bond Funds to PRIAC as having the “character” and “aims,” 29 U.S.C. § 1104(a)(1)(B), of an enhanced index fund. Whatever ambiguity that term may have in the investment industry generally, in this case PRIAC reasonably understood it to mean that the Bond Funds employed a “low tracking error,” (PX 63), “risk controlled strategy,” (*id.*), that sought to “add value over the index while mirroring its risk profile,” (PX 61), and “combine the predictable strengths of passive management with the repeatable aspects of active management,” (PX 77).

The risk metrics State Street disclosed to PRIAC about the Bond Funds were consistent with State Street’s presentation, and PRIAC’s understanding, of the Bond Funds as enhanced index funds. In 2005, State Street disclosed that the Bond Funds were being managed to accept a predicted tracking of 50-75 basis points, but by 2007, the Bond Funds in actuality were being managed to accept a predicted tracking error double that amount. State Street contends that PRIAC should have been aware of the true risk metrics of the Bond Funds because State Street posted the Bond Funds’ alpha targets on its rarely-used Client’s Corner website. But as indicated in the Court’s findings of fact, the website only would have revealed the Bond Funds’ actual predicted tracking error through a series of assumptions that PRIAC was not required to make. It therefore was not an adequate means of informing PRIAC that the Bond Funds in 2007 were willing to accept double the amount of risk State Street disclosed to PRIAC two years earlier. Moreover, the risk metrics to which the Bond Funds actually were managed were significantly greater than the risk metrics to be expected from a fund that purports to employ a “low tracking error” enhanced index strategy.

Thus, without disclosing its intention to do so, State Street managed the Bond Funds to accept risks significantly beyond those of “an enterprise of a like character and with like aims,” 29 U.S.C. § 1104(a)(1)(B), and in doing so acted imprudently. State Street did not make a sufficient determination that the Bond Funds were “reasonably designed . . . to further the purposes of the plan, taking into consideration the risk of loss and opportunity for gain,” 29 C.F.R. § 2550.404a-1(b)(2), because State Street in large part ignored the fact that the Plans were seeking to own a strategy that incurred significantly less risk than the Bond Funds in fact accepted. A strategy that accepts a predicted tracking error of 100-150 basis points compared to its benchmark and that fails to disclose that decision to its investors does not fit the mold of what the Plans thought they bargained for. Accordingly, State Street did not give “appropriate consideration” to the role the Bond Funds were intended to play in the Plans’ portfolio and therefore breached its duty to act prudently.

As State Street increased the predicted tracking error in the Bond Funds, it began to invest larger and larger amounts of the Bond Funds’ assets in securities backed by subprime mortgages. Its decision to do so under the circumstances was imprudent.

It cannot be said that State Street simply failed to conduct an “independent investigation into the basis,” *Donavan v. Bierwirth*, 538 F. Supp. 463, 470 (E.D.N.Y. 1981), for its decision to concentrate the Bond Funds’ off-index investments in securities backed by subprime mortgages. Indeed, the evidence showed that State Street was well aware of the risks in the subprime mortgage market leading up to the crisis in the summer of 2007. For example, in March 2006 Flannery acknowledged the problems in the mortgage market and asked his team to prepare a presentation on the relevant issues. In addition, Flannery created the position of Head of Credit Policy to keep him apprised of developments in the mortgage and credit markets, and Dan

Stachel (who Flannery appointed to that role) made Flannery aware of the problems and developments in those markets on an ongoing basis. State Street also received warnings about the deteriorating credit quality of mortgage deals underlying the ABS from its Cash desk and from the bank's Asset Liability Committee well before the summer of 2007. Furthermore, the events of February and March of 2007 highlighted for State Street the volatility and risk across all types of subprime instruments, with Flannery acknowledging in April 2007 that problems in the subprime mortgage market were likely to persist for "some time," and that investments in that sector were likely to suffer losses along the way. As a result of the events of February and March, State Street's Risk Management took steps to recalculate the risk of the ABX trade using figures that reflected its actual (volatile) performance. Risk Management also voiced its negative view of the risk-return relationship in the subprime sector to the fixed income group well prior to the crisis of the summer of 2007.

The problem for State Street, however, was that it largely ignored the results of its own investigation. Between the end of March and the end of June 2007, the IBF alone increased its notional exposure to subprime assets by \$400 million. This increase included a \$19 million dollar increase in exposure to the BBB ABX Index, the instrument whose severe volatility in February led Risk Management to take control of modeling the trade's risk, and a \$324 million increase in AAA and AA TRS and subprime-backed cash bonds, despite State Street's awareness that in March 2007 spreads on AAA ABS had increased by more than 50%, and spreads on AA ABS had increased by more than 62%.

State Street attempts to justify its decision to increase exposure to subprime assets by pointing to evidence that (1) State Street believed that the February volatility was caused by technical disruptions in the ABX market specifically, and not by negative views on the

fundamentals of subprime-backed assets, (2) by June 2007, spreads on AAA and AA subprime ABS had decreased to the same levels they held in June 2006, and (3) the Bond Funds added interest rate swaps as a hedge against their subprime holdings.

With respect to the Bond Funds' use of interest rate swaps as a hedge against subprime, the evidence showed that the swaps were not a meaningful way of hedging the primary risk—credit risk—inherent in the Bond Funds' subprime holdings. With respect to State Street's other justifications, it must be said that the evidence showed that between February and June 2007 there were mixed signals in the market regarding the viability of State Street's subprime trades, specifically, the reversion of AAA and AA yield spreads to their June 2006 levels, the relatively more severe volatility in the ABX BBB than in its underlying cash bonds, and the Bond Funds' positive performance in April and May. But the evidence also showed that the February and March volatility had a significant impact on the higher-rated ABS tranches, and any suggestion that the lower spreads in June 2007 provided a signal to State Street that the worst was over is dubious, especially in light of State Street's awareness of weaknesses in the market and Flannery's warning in April 2007 that problems in the subprime market were likely to persist for "some time" and to cause losses along the way. The evidence, of course, did not establish that exposure to the subprime market was per se imprudent for the Bond Funds, but given the role the Plans reasonably expected the Bond Funds to play in their portfolios, along with the information known to State Street about the weaknesses in the subprime market, it is difficult to justify the extent to which State Street allowed the fate of the Bond Funds to ride on its view of the fundamental soundness of the subprime mortgage sector.

In any event, whatever the reasonableness of State Street's belief in the fundamental soundness of the subprime market, the Bond Funds' increase in subprime exposure between

March and June 2007 came at the expense of its risk management policies, specifically, its risk budgeting policy. Between March and June 2007, the Bond Funds utilized anywhere from nearly 150% to 200% of their monthly risk budgets, which, as indicated in the Court’s findings of fact, already were in excess of the risk profile State Street presented to PRIAC for the Bond Funds. State Street tried to downplay the significance of its violations of its risk budgeting policy by pointing out that it used a conservative “correlation of one” assumption in calculating risk capital utilization and that much of the budget-excess was attributable to the BBB ABX trade. But State Street offered no empirical evidence of the Bond Funds’ risk capital utilization based on actual correlations,²³ and, in any event, as PRIAC’s expert Dr. Culp testified, the purpose of a risk budget “is to set aside capital to absorb unanticipated and unanticipatable events.” (Tr. 520:25-521:1) Using a correlation of one seems entirely consistent with that purpose. The Bond Funds’ risk budgets reflected the level of risk State Street purportedly was willing to accept even in extreme market conditions, and it is no excuse for systematically exceeding the budget that much of the excess was attributable to one particular position. If State Street liked the BBB ABX trade too much to cut it, it could have reduced risk elsewhere.

By the end of May 2007, the IBF had exposure to subprime securities that totaled 143% of the net asset value of the entire fund, and the GCBF had exposure to subprime securities that totaled 151% of the net asset value of the fund. A significant portion of that amount was attributable to TRS and the ABX Index—derivative securities whose underlying indices had very limited historical track records upon which to create reliable risk models. State Street was aware of the “model risk” associated with newly created instruments and believed that a prudent strategy with respect to such instruments was to “cap allocation to manageable size—from

²³ Patrick Armstrong testified that State Street had a “correlation matrix” that reflected the true correlations of a portfolio’s investments, (Tr. 110:1-7), but it appears to the Court that the matrix was not placed in evidence.

perspective of notional at risk.” (PX 585.) By end of June 2007, however, the IBF had notional exposure to the subprime TRS and ABX Index totaling \$1.31 billion. The market value of the entire fund at this time was \$1.28 billion, and the total notional exposure of the entire portfolio was just under \$4 billion (including the high-notional, low-risk interest rate swaps). Exposure to two types of newly created instruments that exceeds the market value of the entire fund and amounts to more than 30% of the fund’s notional exposure (which includes high-notional value positions that offered very little in terms risk and reward) can hardly be considered an allocation that has been capped to a “manageable size.” Even after State Street’s Risk Management group made an admirable effort to accurately calculate the risk in the ABX trade and later the TRS, the portfolio managers largely disregarded the increased risk figures and continued to hold, and even increased exposure to, those positions despite Risk Management’s view on their riskiness and despite the effect of the increased risk metrics on the Bond Funds’ risk capital utilization.

Based on the foregoing, PRIAC has met its burden of showing that State Street failed to manage the Bond Funds “with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.” 29 U.S.C. § 1104(a)(1)(B).

II. State Street Did Not Violate Its Duty of Loyalty

A. Duty of Loyalty Under ERISA

Section 404(a) of ERISA provides, “a fiduciary shall discharge his duties with respect to a plan solely in the interest of the participants and beneficiaries and . . . for the exclusive purpose of: . . . providing benefits to participants and their beneficiaries.” 29 U.S.C. § 1104(a)(1)(A)(i). This “exclusive purpose” requirement imposes on ERISA fiduciaries a duty of loyalty to

retirement plans and their beneficiaries. *See Leigh v. Engle*, 727 F.2d 113, 123 (7th Cir. 1984); *Tibble v. Edison, Int’l*, No. 07 Civ. 5359, 2010 WL 2757153, at *18 (C.D. Cal. July 8, 2010). This duty is “an unwavering duty . . . to make decisions with single-minded devotion to a plan’s participants and beneficiaries.” *Morse v. Stanley*, 732 F.2d 1139, 1145 (2d Cir. 1984).

Nonetheless, in the ERISA context, “a conflict of interest alone is not a per se breach: ‘nowhere in the statute does ERISA explicitly prohibit a trustee from holding positions of dual loyalties.’” *Tibble*, 2010 WL 2757153, at *18 (quoting *Friend v. Sanwa Bank of Cal.*, 35 F.3d 466, 468-69 (9th Cir. 1994)). ERISA for example permits an officer of a sponsoring company to serve as a fiduciary of the company’s retirement plan and also permits such a plan to purchase a certain amount of the sponsoring company’s securities. *See* 29 U.S.C. § 1108(c)(3); *id.* § 1107(a)(3); *Donavan v. Bierwirth*, 680 F.2d 263, 271 (2d Cir. 1982) (“*Bierwirth I*”). “Consistent with this rule, a fiduciary does not breach his duty of loyalty by pursuing a course of conduct which serves the interests of the plan’s beneficiaries while at the same time ‘incidentally benefitting’ the plan sponsor or even the fiduciary himself.” *Tibble*, 2010 WL 2757153, at *18 (citations omitted). Of course, the benefit to the plan’s fiduciary truly must be “incidental” to a decision that is in the best interests of the plan participants; the decision “must be made with an eye single to the interests of the participants and beneficiaries.” *Bierwirth I*, 680 F.2d at 271.

B. Application

PRIAC has not met its burden of showing that State Street violated its duty of loyalty to the Plans. To be sure, as discussed above, State Street’s decision to increase significantly the acceptable risk levels in the Bond Funds without notifying PRIAC was imprudent under the circumstances, but PRIAC has not shown that the decision was made for reasons other than for the “exclusive purpose” of providing benefits to plan beneficiaries. 29 U.S.C. § 1104(a)(1)(A)(i).

PRIAC contends that the decision to seek more aggressive alpha targets and accept more substantial risk in the Bond Funds was motivated by State Street's desire to gain a reputation as a manager of active fixed income in order to generate more revenue and business for the firm. But the only evidence PRIAC has produced to connect State Street's business objectives to the Bond Funds' risk and return targets is an admission by Susan Reigel that Michael O'Hara, a senior manager who played a role in State Street's mission to "Establish SSgA as a Global Leader in Active Fixed Income," (PX 184), gave her the go-ahead in 2006 to raise the alpha targets in the Bond Funds to 70-80 basis points. The remainder of PRIAC's evidence on this point is not specific to the particular Bond Funds at issue, and is insufficient to warrant the inference that State Street more likely than not increased the Bond Funds' risk and return targets other than for the "exclusive purpose" of providing benefits to the Plans.

Michael Wands, another senior manager involved in the "leverage fixed income" initiative, testified that he did not recall the reasons behind increasing the alpha targets in the particular Bond Funds at issue here, but he did testify that State Street increased the alpha targets of some existing bond funds between 2005 and 2007 because State Street felt it had the skill and risk management techniques to do so. (Wands Dep. 47-49.) Wands's testimony does not warrant the conclusion that the increase in alpha targets was motivated by State Street's "leverage fixed income" initiative, especially in light of both Flannery's and Reigel's testimony that the initiative had no effect on the Bond Funds.

It ultimately is unclear precisely why State Street decided to increase the risk and return parameters in the Bond Funds between 2005 and 2007 in the manner that it did. It may be that there was a disconnect between the State Street personnel who actually managed the Bond Funds and the State Street personnel who were responsible for presenting the characteristics of the

Bond Funds to PRIAC. While any disconnect between State Street's fixed income managers and its client-facing personnel no doubt is problematic for other reasons, it is insufficient to establish a breach of the duty of loyalty. *See Tibble*, 2010 WL 2757153, at *24 n.19 (stating in dicta, "[A] breach of that duty [of loyalty] requires some showing that the fiduciaries' decisions were *motivated by a desire to serve the interests of [the fiduciaries] over those of the beneficiaries*" (citations omitted)). Accordingly, PRIAC has not met its burden on this claim.

III. State Street Violated Its Duty of Diversification

A. Duty of Diversification Under ERISA

ERISA section 404(a)(1)(C) requires fiduciaries to "diversify[] the investments of the plan so as to minimize the risk of large losses, unless under the circumstances it is clearly prudent not to do so." 29 U.S.C. § 1104(a)(1)(C).

A fiduciary's performance of the duty to diversify "may be measured by the diversity it has achieved in a particular investment vehicle and, where the management of a plan's investments is distributed among several managers, in the segment of the plan for which it has responsibility." *In re Unisys Sav. Plan Litig.*, 74 F.3d 420, 438-40 (3d Cir. 1996). Further,

Congress has instructed that "[t]he degree of investment concentration that would violate this requirement to diversify cannot be stated as a true percentage, because a prudent fiduciary must consider the facts and circumstances of each case. The factors to be considered include (1) the purposes of the plan; (2) the amount of the plan assets; (3) financial and industrial conditions; (4) the type of investment, whether mortgages, bonds or shares of stock or otherwise; (5) distribution as to geographic location; (6) distribution as to industries; (7) the dates of maturity."

Id. at 438 (quoting H.R. Rep. No. 83-1280 (1974), *as reprinted in* 1974 U.S.C.C.A.N. 5038, 5085). Congress also has indicated that if a fiduciary "is investing in mortgages on real property he should not invest a disproportionate amount of the trust in mortgages in a particular district or

on a particular class of property so that a decline in property values in that district or of that class might cause a large loss.” *Id.* at 439 (quoting H.R. Rep. No. 83-1280).

B. Application

The evidence showed that the Bond Funds invested in a variety of sectors, and that, by market value, ABS constituted only 40% of the net asset value of the GCBF and 35% of the net asset value of the IBF as of the end of June 2007. By comparison, the Accessor Fund invested 24% of its assets in Commercial Mortgage Backed Securities (“CMBS”), while the Baird Fund invested 17% of its assets in MBS²⁴. (*See* PX 18, Exs 18, 19.) The market value figures for the Bond Funds, however, understate their true exposure to subprime assets because they include the market value, rather than the notional value, of the TRS and the ABX Index.

When notional values are examined, the IBF and GCBF had actual exposure to subprime securities totaling 143% and 151%, respectively, of the net asset values of their funds.²⁵ These figures do not include the notional value of the interest rate swaps and Eurodollar trades that the Bond Funds put on in an attempt to hedge their subprime exposure, but those trades had disproportionately high notional value compared to the return they could be expected to generate or the risk they added to the portfolio. Accordingly, they hardly can be considered a source of diversification under these circumstances.

The Plans invested in the Bond Funds as enhanced index funds, which PRIAC expected to employ leverage, if at all, only in a way that would not “contribute to the risk profile of the fund in a meaningful way.” (Tr. 273:3-8 (Frascona testimony).) State Street’s decision to place a significantly leveraged bet in a single off-index sector, and to increase that bet in the face of

²⁴ As referenced in the Court’s findings of fact, Mortgage Backed Securities refer to securities backed by mortgages to prime borrowers.

²⁵ The Baird Fund and the Accessor Fund did not use leverage. (*See* PX 18, Ex. 20 (comparing actual exposure, including leverage, between the Bond Funds and the Accessor and Baird Fund).)

known risks about that sector, cannot be said to satisfy State Street's duty to diversify the Bond Funds in a manner consistent with the purposes of the Plans that invested in them.

State Street contends that, apart from the issue of external diversification, the Bond Funds in any event were diversified because the home-equity ABS sector itself is internally diversified. There is evidence to support that notion. The evidence showed that prior to the housing crisis many criteria that affected borrowers' abilities to repay mortgages were local or regional in nature. The evidence also showed that broad declines in housing values on a national scale were quite rare. In addition, the mortgages backing the Bond Funds' investments were distributed roughly according to the distribution of subprime mortgages throughout the entire country. The mortgages further were distributed across different loan originators and servicers.

But given the information known to State Street about the subprime mortgage market leading up to the crisis, the internal diversification in the home-equity ABS sector cannot go as far as State Street takes it. As discussed above, State Street had received repeated warnings about the weakness of the subprime market leading up to the summer of 2007. In addition, greater than 25% of the mortgage collateral in the LDBF was made up of subprime mortgages from California, and in 2007, State Street analysts had recommended that the firm avoid investing in mortgages from California because of inflated home prices and highly leveraged borrowers in that state. More fundamentally, State Street's decision to place such a large bet on assets that depended on the performance of a single type of mortgage—those to borrowers with impaired credit histories—is inconsistent with Congress's recommendation in ERISA's legislative history that, if investing in mortgages, a fiduciary should avoid “invest[ing] a disproportionate amount of the trust in mortgages of a particular district or *on a particular class of property* so that a decline in property values in that district *or of that class* might cause a large

loss.” H.R. Rep. No. 93-1280, *as reprinted in* 1974 U.S.C.C.A.N. at 5085 (emphasis added).

State Street made precisely this kind of investment in securities backed by subprime mortgages, and its decision to do so resulted in undiversified risk for the Bond Funds.

While a fiduciary may avoid liability for failing to diversify if the fiduciary can show that “it is clearly prudent not to” diversify, 29 U.S.C. § 1104(a)(1)(C); *see Reich v. King*, 861 F. Supp. 379, 384 (D. Md. 1994), State Street has not made the requisite showing here. *See Reich*, 861 F. Supp. at 383 (“Defendants’ task is ‘not merely to prove that the investment is prudent, but that there is no risk of large loss resulting from the non-diversification.’” (quoting *Marshall v. Glass/Metal Ass’n & Glaziers & Glassworkers Pension Plan*, 507 F. Supp. 378, 384 (D. Haw. 1980))). Accordingly, PRIAC has shown that State Street violated its fiduciary duty to diversify plan assets.

IV. Causation and Damages

Section 409 of ERISA provides, “Any person who is a fiduciary with respect to a plan who breaches any of the responsibilities, obligations, or duties imposed upon fiduciaries by this subchapter shall be personally liable to make good to such plan any losses to the plan *resulting from* each such breach.” 29 U.S.C. § 1109(a) (emphasis added). Section 409 speaks both to causation, *see, e.g., Silverman v. Mutual Benefit Life Insurance Co.*, 138 F.3d 98, 105 (2d Cir. 1998) (Jacobs, J., concurring), and damages, *see California Ironworkers Field Pension Trust v. Loomis Sayles & Co.*, 259 F.3d 1036, 1046 (9th Cir. 2001). *See also Salovaara v. Eckert*, No. 94 Civ. 3430, 1998 WL 276186, at *4 (S.D.N.Y. May 28, 1998) (“[B]oth loss to the fund, and a causal connection between that loss and defendant’s breach, are necessary elements of an ERISA claim for damages under 29 U.S.C. § 1109(a) . . .”).

A. Causation

With respect to causation under section 409, a majority of the Second Circuit panel in *Silverman* has stated, “Causation of damages is . . . an element of the claim, and the plaintiff bears the burden of proving it.” *Silverman*, 138 F.3d at 105 (Jacobs, J., concurring).²⁶ As discussed in this Court’s opinion on summary judgment, however, neither *Silverman* nor cases from other federal circuits “address the question of what causation standard governs an ERISA plaintiff’s case.” *In re State Street*, 772 F. Supp. 2d at 542; *see id.* at 541-43. Indeed, *Silverman* speaks only of “some causal link between the alleged breach of . . . dut[y] and the loss plaintiff seeks to recover.” *Silverman*, 138 F.3d at 104.²⁷ Furthermore, because the panel in *Silverman* found that ERISA section 409 departed from the common law of trusts by placing the burden to prove causation on the plaintiff, *Silverman* “cautions against drawing too much upon the law of trusts for the causation analysis in ERISA.” *In re State Street*, 772 F. Supp. 2d at 543 n.14.

The Supreme Court’s recent decision in *Pacific Operators Offshore, LLP v. Valladolid*, -- S. Ct. ---, 2012 WL 75045 (Jan. 11, 2012), may offer some guidance on the standard of causation required by ERISA section 409’s “resulting from” language. *Valladolid* dealt with the interpretation of a provision of the Outer Continental Shelf Lands Act (OCSLA). The OCSLA “extends the federal workers’ compensation scheme established in the Longshore and Harbor Workers’ Compensation Act (LHWCA), 33 U.S.C. § 901 *et seq.*, to injuries ‘occurring as the result of operations conducted on the outer Continental Shelf’ for the purpose of extracting natural resources from the shelf.” *Id.* at *3 (quoting 43 U.S.C. § 1333(b)). The respondent was an employee of petitioner Pacific Operators Offshore (“Pacific”) who spent 98 percent of his working hours on one of Pacific’s platforms on the outer Continental Shelf (“OSC”), but who

²⁶ Judge Meskill joined Judge Jacobs’s concurring opinion in *Silverman*. Thus, Judge Jacobs’s concurrence reflects the opinion of a majority of the Second Circuit panel in that case.

²⁷ This language appears in Judge Leval’s opinion, in which all members of the panel joined.

was killed in a forklift accident while working in Pacific's onshore processing facility. *Id.* The question for the Supreme Court was the proper interpretation of the phrase "any injury occurring *as the result of* operations conducted on the outer Continental Shelf," 43 U.S.C. § 1333(b) (emphasis added).

As relevant here, the Supreme Court adopted the Ninth Circuit's interpretation of the phrase, which required a plaintiff to "establish a substantial nexus between his injury and his employer's extractive operations on the Outer Continental Shelf." *Valladolid*, 2012 WL 75045, at *1, *9-10. The Supreme Court understood the Ninth Circuit's "substantial nexus" requirement to refer to "a significant causal link between the injury that [the plaintiff] suffered and his employer's on-OCS operations conducted for the purpose of extracting natural resources from the OCS." *Id.* at *9. In reaching its decision to adopt the "substantial nexus" requirement, the Court referenced one of its earlier decisions in which it had interpreted language in the federal RICO statute as imposing a proximate cause standard because the language in the RICO statute provided a cause of action to "[a]ny person injured in his business or property *by reason of* a violation of section 1962." *Id.* at *9 (quoting 18 U.S.C. § 1964(c)). Nonetheless, the Court in *Valladolid* did not adopt, or discuss its reasons for not adopting, a proximate cause standard labeled as such. Indeed, as Justice Scalia speculated in a concurring opinion, "Does the Court mean to establish, by the novel 'substantial [causal] nexus' test, a new *tertium quid* of causality—somewhere between but-for causality and proximate cause? One might think so" *Id.* at *11 (Scalia, J., concurring) (alteration in original).²⁸

²⁸ It bears noting that the provision at issue in *Valladolid*, 43 U.S.C. § 1333(b), provides compensation for "disability or death of an employee *resulting from* any injury *occurring as the result of* operations conducted on the outer Continental Shelf." *Id.* (emphasis added). As Justice Scalia noted,

Before today, I would have thought it clear that courts must apply proximate-cause analysis to the "resulting from" provision; but that would seem quite peculiar if (as the Court holds today) we apply substantial-nexus analysis to the neighboring "occurring as the result of" provision. Surely both phrases express the same concept.

Given the substantial similarity in language between 43 U.S.C. § 1333(b)'s use of the phrase "as the result of" and ERISA section 409's use of the phrase "resulting from," it seems entirely possible that the phrase "resulting from" in ERISA section 409 may be interpreted to impose the same "substantial nexus" requirement as the phrase "as the result of" in § 1333(b), which may or may not itself be a slightly watered-down version of the traditional proximate cause standard employed in tort law. But whatever the correct standard for causation, PRIAC has met its burden of proving it in this case.

For the reasons given in its opinion on summary judgment, the Court finds that the doctrine of superceding cause is not available to State Street under these circumstances. *See In re State Street*, 772 F. Supp. 2d at 543-46. Furthermore, the Court finds that PRIAC has established a "significant causal link," *Valladolid*, 2012 WL 75045, at *9, between the Plans' losses and State Street's breaches of its fiduciary duties, or, alternatively, that State Street's breaches proximately caused the Plans' losses.²⁹

State Street breached its fiduciary duties by managing the Bond Funds to accept risks significantly greater than PRIAC reasonably expected; by further disregarding the Bond Funds' established risk budgets, thus exposing the Bond Funds to risks greater than even State Street itself thought it was willing to accept; by concentrating the investments that generated the excess risk in a single asset class, consisting in large part of untested derivatives used to create significant leverage in the portfolios; and by failing adequately to diversify the portfolio to minimize the risk of large losses. When the excessive risks to which State Street exposed the

Valladolid, 2012 WL 75045, at *12 (Scalia, J., concurring).

²⁹ State Street argues that PRIAC has not shown causation because it has not shown what *portion* of the Plans' losses is attributable to State Street's imprudent investment decisions. But that issue is more appropriately considered as an argument with respect to PRIAC's calculation of damages, not with respect to causation. While the issues are intertwined, they nonetheless are separable in these circumstances. *See Silverman*, 138 F.3d at 106 n.1 (Jacobs, J., concurring) (distinguishing an Eighth Circuit case because it "involved the *calculation of damages* after the plaintiff proved a prima facie case that the plan suffered a loss resulting from the defendant's breach of its fiduciary duty," and because "[t]he issue before this Court involves the burden of proving causation, not damages").

Bond Funds materialized in the summer of 2007, the value of the Plans' interests in the Bond Funds declined, causing economic loss to each Plan that would not have occurred to the extent that it did if State Street had not breached its duties. The evidence confirms that State Street itself believed that its failure to observe its risk management policies caused losses, with Michael Wands's handwritten notes revealing the view that State Street "should have been faithful to our risk mgmt/budgeting process: would have cut risk sooner, would have lowered risk in the strategy; would have bailed on trades sooner." (PX 706.) There is thus a "direct relation between the injury asserted and the injurious conduct alleged," *Holmes v. Securities Investor Protection Corp.*, 503 U.S. 258, 268 (1992), such that even under a proximate cause standard, causation would be established.

B. Damages

The more difficult question is whether PRIAC has "sustained [its] burden of proving an amount of damages caused by" State Street's breaches. *Diduck v. Kaszycki & Sons Contractors*, 974 F.2d 270, 279 (2d Cir. 1992) (emphasis added), *abrogated on other grounds*, see *Gerosa v. Savasta & Co.*, 329 F.3d 317, 327-28 (2d Cir. 2003). As noted above, ERISA section 409 permits a plaintiff to recover only those "losses to the plan resulting from" the defendant's breach. 29 U.S.C. § 1109(a). In addition, in a case such as this, "[t]he court may approximate the extent of damages." *Meyer v. Berkshire Life Ins. Co.*, 250 F. Supp. 2d 544, 572 (D. Md. 2003) (citing *Martin v. Feilen*, 965 F.2d 660, 672 (8th Cir. 1992)).

At trial, PRIAC presented the Plans' losses by comparing what the Plans earned in the Bond Funds between June 1, 2007 and the date of their redemptions with what they would have earned in an allegedly comparable, prudently managed mutual fund. The losses for Plans invested in the IBF was measured by comparing the IBF's performance to the performance of the

Baird Fund, and losses for Plans invested in the GCBF were measured by comparing the GCBF's performance to the performance of the Accessor Fund. PRIAC contends that this is the correct way to measure damages in a case like this because "[w]here a breach of fiduciary duty has involved a pattern of investment mismanagement rather than one imprudent investment decision, it is appropriate to determine the amount of plan losses under Section 409(a) by reference to the general pattern of investment, rather than based on specific investment decisions." (PRIAC's Proposed Conclusions of Law ¶ 59 (citing *Dardaganis v. Grace Capital Inc.*, 889 F.2d 1237, 1243-44 (2d Cir. 1989)).)

State Street, on the other hand, contends that where the fiduciary's breach is based on the degree, rather than the fact, of investment in a particular security or type of security, the fiduciary is liable only for losses attributable to the portion of the investment in excess of the prudent level. *See Loomis*, 259 F.3d at 1046-47; Restatement (Second) of Trusts § 205, cmt. f. State Street contends that such a determination requires PRIAC to show "which losses arose from what allegedly imprudent positions." (State Street's Post-Trial Mem. 28.)

In *Donavan v. Bierwirth*, 754 F.2d 1049 (2d Cir. 1985) ("*Bierwirth II*"), the Second Circuit Court of Appeals addressed the proper manner in which to calculate damages pursuant to ERISA section 409. *Bierwirth II* involved trustees of the Grumman Corporation Pension Plan who used plan assets to purchase additional shares of Grumman stock in order to thwart a takeover bid. *Id.* at 1051-52. The trustees were also high-ranking officials at Grumman. *Id.* at 1052. The court assumed for purposes of its decision that the trustees' purchase of the Grumman shares constituted a breach of their fiduciary duty under ERISA. *Id.* at 1051 n.2. After the trustees sold the Grumman shares some seventeen months later at a profit, the Secretary of Labor and a private plaintiff brought suit seeking to recover damages as a result of the trustees' alleged

breach. The Second Circuit framed the question before it as, “Specifically, if securities are purchased in breach of trust but are later sold at a price exceeding the purchase price, is there a ‘loss’ within the meaning of ERISA section 409?” *Id.* at 1052.

In formulating the proper manner in which to measure a plan’s “loss,” the court noted that “[o]ne appropriate remedy in cases of breach of fiduciary duty is the restoration of the trust beneficiaries to the position they would have occupied but for the breach of trust.” *Id.* at 1056 (citations omitted). Accordingly, the court held,

[T]he measure of loss applicable under ERISA section 409 requires a comparison of what the Plan actually earned on the Grumman investment with what the Plan would have earned had the funds been available for other Plan purposes. If the latter amount is greater than the former, the loss is the difference between the two; if the former is greater, no loss was sustained.

Id. (citations omitted). The court continued,

In determining what the Plan would have earned had the funds been available for other Plan purposes, the district court should presume that the funds would have been treated like other funds being invested during the same period in proper transactions. Where several alternative investment strategies were equally plausible, the court should presume that the funds would have been used in the most profitable of these. The burden of proving that the funds would have earned less than that amount is on the fiduciaries found to be in breach of their duty. Any doubt or ambiguity should be resolved against them.

Id. The court also noted that its instruction to resolve ambiguities against the breaching fiduciaries “is nothing more than application of the principle that, once a breach of trust is established, uncertainties in fixing damages will be resolved against the wrongdoer.” *Id.* (citing *Leigh v. Engle*, 727 F.2d 113, 138 (7th Cir. 1984); *McMerty v. Herzog*, 710 F.2d 429, 431 (8th Cir. 1983)). Thus, when calculating damages under section 409, the Court must compare what the Plans actually earned on the imprudent investment with what the Plans would have earned had the imprudently managed funds been available for other purposes.

The parties appear to agree that *Bierwirth II* sets out generally the correct method for calculating damages in this case. They disagree, however, about whether PRIAC's calculation of the Plans' damages comports with two later federal circuit court decisions dealing with the calculation of damages pursuant to ERISA section 409: the Second Circuit's decision in *Dardaganis* and the Ninth Circuit's decision in *Loomis*.

In *Loomis*, the Ninth Circuit agreed with the district court's conclusion that an ERISA investment manager breached his duty of prudence by investing "too much" of the trust's assets in an investment vehicle known as an "inverse floater."³⁰ *Loomis*, 259 F.3d at 1045. The Ninth Circuit agreed that the investment manager had not given "appropriate consideration to the particular needs of the Welfare Trust" because the evidence showed "that inverse floaters could be highly risky investments, that the Welfare Trust had very conservative investment guidelines and that nearly one third of the Welfare Trust's total assets were invested in inverse floaters as opposed to the much smaller percentages [in other trusts that the manager controlled]." *Id.* at 1044-45.

With respect to damages, the Ninth Circuit adopted the "permissible percentage standard" articulated in the Restatement (Second) of Trusts. *Id.* at 1047; *see* Restatement (Second) of Trusts § 205, cmt. f ("If a breach of trust consists only in investing too large an amount in a single security or type of security, the trustee is liable only for such loss as results from the investment of the excess beyond the amount which it would have been proper so to invest."). The court held that where "the breach of fiduciary duty arises from the degree rather than the mere fact of investment in a particular security," damages should be based on the amount of the

³⁰ The Ninth Circuit described an "inverse floater" as follows: "A floater is a type of collateralized mortgage obligation ('CMO'), that is, a security backed directly or indirectly by real estate mortgages. Unlike a common floater, an inverse floater's rate of return moves inversely to market rates, rising when the rate index falls and falling when the rate index rises." *Loomis*, 259 F.3d at 1041.

investment that exceeded the prudent level because “[i]t would be both illogical and unjust to require a fiduciary to pay damages resulting from the entire amount of an investment when only a portion of the investment was imprudent.” *Loomis*, 259 F.3d at 1047. Accordingly, the Ninth Circuit remanded the case to the district court to “articulate a permissible percentage of investment in inverse floaters for the Welfare Trust.” *Id.*

In *Dardaganis*, the Second Circuit examined the appropriate calculation of damages where an ERISA fiduciary had breached its duty by investing too heavily in stocks, contrary to the investment guidelines of the fund, which required exposure to stocks to be limited to 50% (based on the cost basis of all securities) of the fund. 889 F.2d at 1239, 1242, 1243. The district court calculated damages as “the difference between the earnings of the Fund as invested and what the earnings would have been if the 50% limit had been observed and the assets had been invested in non-equity securities instead.” *Id.* at 1243. Relying on *Bierwirth II*, the district court then used an “averaging technique” to determine how the fund’s portfolio could be brought down to the 50% limit. As the Second Circuit explained,

In essence, since it is impossible to know after the fact which stocks GCI [the defendant] would have sold to comply with the 50% guideline, the Court assumed that at the end of each reporting period GCI would have liquidated an equal proportion of each stock held, sufficient to reduce the total stock holdings to 50% of the Fund’s assets (with all holdings valued at cost).

Id. The defendants argued that the district court should have looked at specific investment decisions and determined whether the fund lost money as a result of any of those decisions. *Id.* This would have given the defendant “an opportunity to show that the decisions that resulted in excess equity generally were associated with successful stocks,” such that the performance of the portfolio absent the breach would have been worse, and the losses therefore less, than under the district court’s averaging technique. *Id.* at 1243-44. The Second Circuit rejected the argument,

stating, “Where, as in this case, the breach arises from a pattern of investment rather than from investment in a particular stock, courts will rarely be able to determine, with any degree of certainty, which stock the investment manager would have sold or declined to buy had he complied with investment guidelines.” *Id.* at 1244. Accordingly, the court approved of the district court’s averaging technique. *See id.*

PRIAC argues that its calculation of damages—which compares what the Plans’ actually earned in the Bond Funds to what they would have earned in either the Baird or Accessor Funds—is correct because this case “arises from a pattern of investment,” *id.*, and State Street’s breach does not consist “*only* in investing too large an amount in a single security or type of security,” Restatement (Second) of Trusts § 205, cmt. f (emphasis added). State Street, on the other hand, contends that, at bottom, PRIAC’s allegations of fiduciary breach amount to a claim that the Bond Funds invested in “too much” subprime, *Loomis*, 259 F.3d at 1045, and since PRIAC essentially admits that *some* subprime would have been appropriate, PRIAC must attribute losses to specific subprime securities that caused the imprudent excess. Though the question is close, the Court finds that PRIAC’s calculation of damages is appropriate.

PRIAC has the burden of proving an “amount of damages,” *Diduck*, 974 F.2d at 279, “resulting from” State Street’s breaches, 29 U.S.C. § 1109(a). State Street breached its fiduciary duty by exposing the Bond Funds to excessive risks and concentrating those risks into a single asset class of risky securities that did not provide adequate diversification for the portfolios. And while subprime exposure was not imprudent per se, the Bond Funds’ concentration in subprime securities exceeded a prudent level given the “character” and “aims,” 29 U.S.C. § 1104(a)(1)(B), of the Bond Funds. These breaches undoubtedly arise “from a pattern of investment rather than from investment in a particular stock,” *Dardaganis*, 889 F.2d at 1244, and PRIAC therefore

should not be required to attribute losses to specific securities. For that reason, the approach advocated by State Street largely is inappropriate.

On the other hand, the situation here is in many respects similar to the situation in *Loomis*. Therein, the defendant breached its fiduciary duty by failing to give appropriate consideration to the trust's investment objectives because the defendant overlooked the conservative aims of the trust, the risk of the "inverse floaters," and the amount invested in those inverse floaters. *See Loomis*, 259 F.3d at 1044-45. The result of the breach, like here, was "too much" of a particular type of investment, and the Ninth Circuit accordingly required the district court to articulate a permissible percentage in inverse floaters. *See id.* at 1045. *Loomis*'s general approach to damages is sensible, and, like in *Loomis*, the proper calculation of damages here should take into account the propriety of the Bond Funds investing in *some* prudent amount of subprime securities. This would exclude the use of the Bond Funds' benchmark indices as actual comparators since neither of the two benchmark indices invested in ABS at all. (*See* PX 18, Exs. 18-19.) However, the benchmarks' returns would be some indication of a range of damages, particularly since, as here, a precise calculation of what the Bond Funds would have owned and how they would have performed absent State Street's breach is impractical. *Id.* at 1047.

By looking not to the benchmark indices directly, but rather to enhanced index funds that employed the same benchmarks as the Bond Funds, PRIAC's calculation of damages provides an approximate calculation of the yields which reasonably could have been expected from the Bond Funds assuming a prudent allocation to subprime ABS. *Id.* The Baird and Accessor Funds provide reasonable proxies for determining how the Bond Funds might have been managed absent State Street's breaches. The Baird and Accessor Funds used the same benchmarks as the bond funds, and both the Baird and Accessor Funds sought a measure of excess return over their

benchmarks by investing in off-index securities that totaled 24% and 38%, respectively, of the net asset value of the funds. This approach is consistent with the “enhanced index” approach PRIAC reasonably understood the Bond Funds to employ.³¹ Importantly, within their off-index exposure, the Baird and Accessor Funds had exposure to ABS totaling 7% and 14%, respectively, of the net asset value of their funds as of about May 31, 2007. (*See* PX 18, Exs. 18-19.) And while it is unclear exactly what amount of this exposure was to subprime ABS, it is reasonable to infer, based on the composition of the Lehman Brothers ABS Index, that at least 39% of the ABS exposure was to subprime. Thus, PRIAC’s calculation of damages expresses the view that an appropriate concentration in subprime securities for enhanced index funds with the same benchmarks as the Bond Funds was some amount approximating 7% (or less) of the net asset value of the IBF and some amount approximating 14% (or less) of the net asset value of the GCBF.

PRIAC’s calculation thus reflects a state of affairs where the Bond Funds, instead of having exposure to subprime equal to nearly 150% of the funds’ net asset values, had exposure to subprime approximating either 7% or 14% of the fund’s net asset value, with the excess invested either in on-index securities or in off-index securities from a different market sector. This calculation provides a reasonable approximation of “the position [the Plans] would have occupied but for the breach of trust,” *Bierwirth II*, 754 F.2d at 1056, taking into account the fact that such a position properly would include a permissible percentage of subprime exposure. PRIAC’s calculation may not reflect the highest permissible percentage of subprime securities

³¹ State Street criticizes PRIAC’s use of the Morningstar Principia database to identify funds comparable to the Bond Funds because a PRIAC employee had indicated in August 2007 that some of the funds the database identified as enhanced index funds were more actively managed than PRIAC believed an enhanced index fund should be. (*See* DX 347.) If anything, this suggests that the funds identified by Morningstar were *more*, rather than less, comparable to the Bond Funds because the Bond Funds were managed more like traditional active funds than like the enhanced index products that State Street described and that PRIAC reasonably believed the Bond Funds to be.

that the Bond Funds properly could have borne, but in the absence of a competing calculation from State Street and in light of the Second Circuit's admonition that "uncertainties in fixing damages will be resolved against the wrongdoer," *Bierwirth II*, 754 F.2d at 1056, the Court declines to impose such an obligation on PRIAC. Accordingly, the Court finds that PRIAC's calculation of the Plan's losses is consistent with the law in this Circuit and reasonably reflects the losses "resulting from" State Street's breaches, as required by ERISA section 409. PRIAC therefore is entitled to \$76,733,879 in damages, less the appropriate Fair Fund Credit, as discussed below.

V. The Fair Fund Credit

The Court agrees with State Street's calculation of the credit against damages to which it is entitled as a result of its settlement with the SEC.

The parties agree that State Street is entitled to a credit against damages equal to the amount PRIAC received in the SEC settlement (\$52,552,696.77) minus the portion of that amount attributable to the civil penalty State Street paid in the SEC settlement. The total civil penalty State Street paid in the SEC settlement was \$50 million. The percentage of the SEC settlement attributable to the civil penalty portion is equal to \$50 million divided by the total amount paid to investors in the SEC settlement. The parties disagree about the denominator of that figure. PRIAC contends that the denominator should be the amount of the Fair Fund—\$313,590,653—while State Street contends it should be that amount *plus* the amount State Street already had paid certain investors to settle some of their individual claims and for which the SEC credited State Street in the settlement, a total of \$663,191,540.

State Street's signed consent in the SEC action reflects the SEC's intent to credit State Street for amounts that State Street already paid to "Injured Investors" in private settlements.

(*See* PX 810 (“Taking into account a credit for payments Defendant has already made or otherwise committed to pay to these investors, State Street will be paying total compensation to the Injured Investors of \$663,191,540.”).) This suggests that the SEC intended the civil penalty to be a reflection of the \$663 million total payment to investors. Accordingly, the percentage of the settlement attributable to the penalty should be based on the amount the SEC recognized that State Street had paid to investors: \$663,191,540.

Using those figures, State Street is entitled to a credit of \$48,590,223. This figure is obtained by multiplying the percentage of the SEC settlement attributable to the civil penalty (7.54%, or the \$50 million civil penalty divided by the \$663,191,540 paid to investors) by the total PRIAC received in the settlement (\$52,552,696.77) and subtracting that figure from the total PRIAC received in the settlement (again, \$52,552,696.77).

Subtracting the amount of the credit from the amount of damages, PRIAC is entitled to a payment from State Street of \$28,143,656, subject, of course, to a reduction by any amount to which State Street may be entitled as a result of its claim for contribution.

VI. Attorney’s Fees and Prejudgment Interest

Given the fact that two claims in this action remain to be tried, the Court believes it is premature to rule on the issues of prejudgment interest and attorney’s fees at this time.

CONCLUSION

For the foregoing reasons, the Court finds that State Street breached its duty (1) to manage the Bond Funds prudently and (2) to diversify them so as to minimize the risk of large losses. The Court finds that PRIAC failed to meet its burden of proving that State Street breached its duty of loyalty to the Plans. The Court also finds that State Street's breaches caused a loss to the Plans, and that PRIAC's calculation of damages is appropriate. Given these findings, State Street's motion [313] for judgment on partial findings pursuant to Federal Rule of Civil Procedure 52(c) is DENIED. PRIAC is entitled to a payment from State Street in the amount of \$28,143,656 on these claims.

SO ORDERED.

Dated: New York, New York
February 1, 2012

A handwritten signature in black ink, appearing to read 'Richard J. Holwell', written over a horizontal line.

Richard J. Holwell
United States District Judge